Microsoft IT

Dynamics CRM
IMS APP Deployment Document

MICROSOFT LABS   JULY 26, 2019

DYNAMICS 365 MODERN IMMIGRATION MANAGEMENT SYSTEM

The solution provides end-to-end scenario to manage and track immigration cases for their employees.

Contents

1.Summary

1.1 Overview

Microsoft AppSource is our new destination to enable business users to explore and use line-of-business SaaS apps from Microsoft and our partners. Users can also discover add-ins for Microsoft business apps, like Dynamics 365, Power BI, Office and more. Through AppSource, ISVs (app publishers) and other partners can reach a broad range of customers right where the users are either through the AppSource portal or within the context of the Microsoft services they're already using.

1.2 Document Overview

This document describes the components of Immigration Management System (referred as "IMS" in the document) App and its related information including the prerequisites to be made available in the system before proceeding with the IMS App Solution installation and steps to download and import the solution.

This is a living document that will be used to support the CRM application and its associated portal. There are two deployment guides which describe the complete process of deployment of IMS applications:

- IMS Deployment Guide
- Forms Deployment Guide

New Customers who are installing IMS application for the first time need to follow the IMS deployment Guide first and then follow the forms deployment guide later.

Existing customers who already have installed IMS application in their organisation can skip this document and directly follow the forms deployment guide.

2. Prerequisites

As a part of prerequisites to install the IMS App, the below solutions must be installed or imported into the user's CRM organization. The user must login with Office 365 Administrator account to install the below apps.

- Power Auto Number
- Data Export service
- Email Lab Alerts
- Voice of Customer
- CRM Hub Installation
- Portal Installation and Configuration(Custom Portal)

2.1 Power Auto Number

Power Auto Number is an app that enables automatic insertion of random numbers, letters, dates or times in any field of any entity in CRM. The app enables the use of combination of numbers, letters and dates in the CRM fields and provide the ability to number more than one field in each entity. Random numbers are guaranteed to be unique. Power Auto Number is used in this application to create an unique identifier in Foreign national entity.

The power Auto number solution can be downloaded from the below **web site**.

https://www.powerobjects.com/powerpacks/powerautonumber
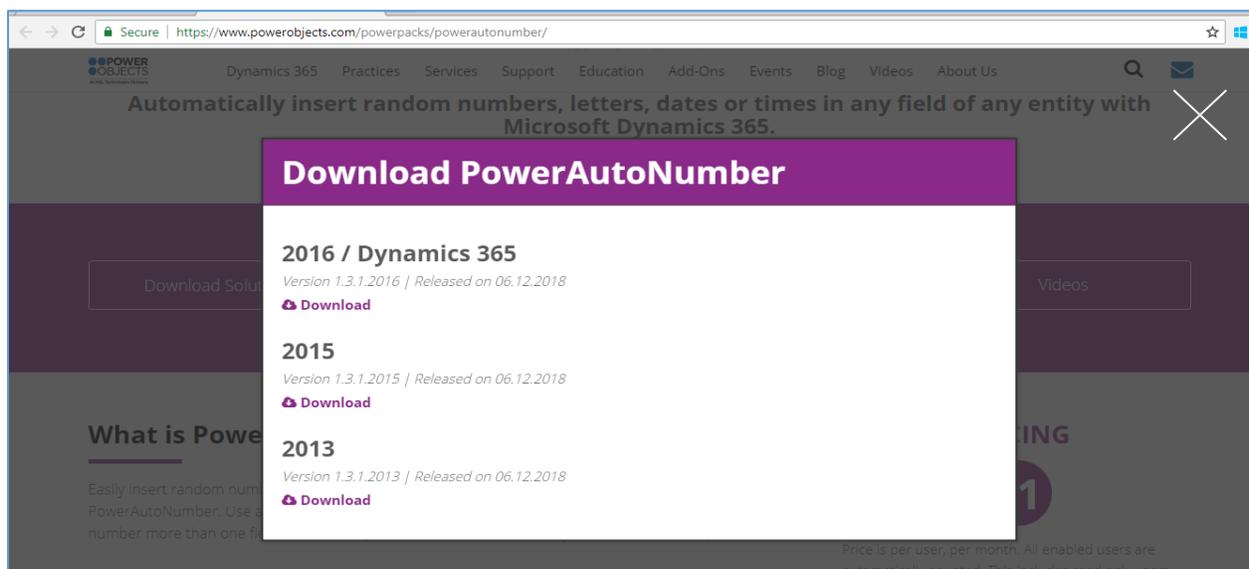

Import the same into the CRM system by navigating to **Settings - > Solutions.**
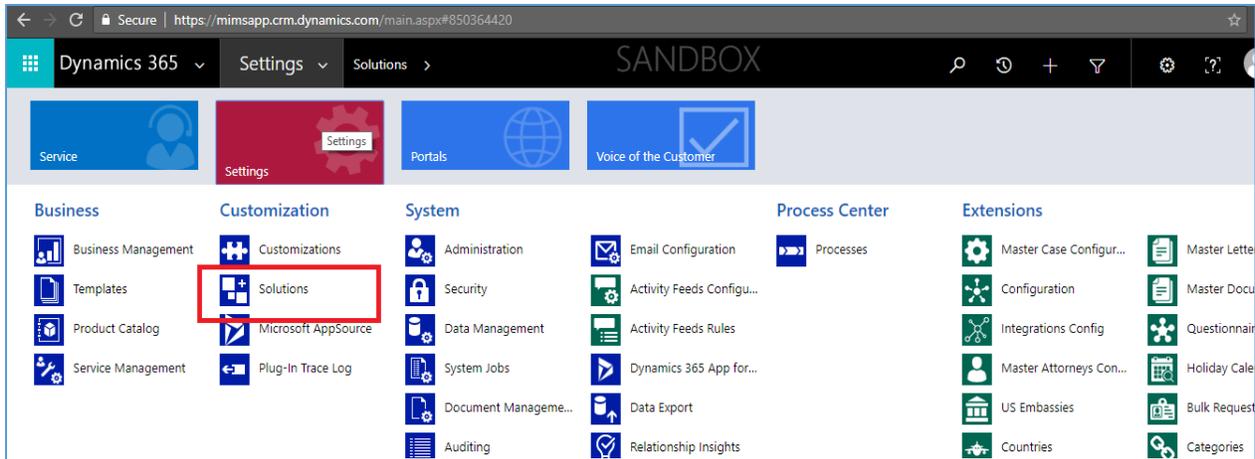
Click on **Import** button in the solutions page.

After importing the Power auto number, the same is available in the below imported list.

2.2 Data Export Service

Data Export Service is an add-on service for Dynamics 365 (online) that provides the ability to replicate sales, service and marketing data to a SQL store in a customer-owned Azure subscription. It simplifies the technical and administrative complexity of deploying and managing a data export solution managing schema and data.

Navigate to the below **URL** , go to "Dynamics 365" Add-Ins and search with the name of "**Data Export Service**" as shown below

URL: https://appsource.microsoft.com/en-us/marketplace

The system will request the connection details like user name, organization name and other details as shown below. Enter the appropriate details and click on **Continue**.

The solution is imported into the system and the same is available in the Imported list as shown below.

2.3 Email Lab Alerts

The Email Alert Solution is an add-on feature to dynamics 365 CRM which provides an overview of received and unread CRM emails on a Case. This is used in this application as it enables users to get the unread mails count which were received on a case.

Navigate to the below **URL** , go to "Dynamics 365" Add-Ins and search with the name of "**Email Alert**" as shown below

URL: https://appsource.microsoft.com/en-us/marketplace

The system will request the connection details like user name, organization name and other details as shown below. Enter the appropriate details and click on **Continue**.

The solution is imported into the system and the same is available in the Imported list as shown below.

## 2.4 Voice of Customer (VOC)

Voice of the Customer is a new Dynamics CRM 2016 feature that was created to capture feedback regarding the product or service provided by the CRM. Voice of the Customer, enables setting up of surveys, survey distribution to contacts via workflows, and capture responses. These captured data can be utilized for generating reports and making appropriate changes to the product/service.

User can take advantage of the feature by installing Voice of the Customer solution. The Solution is available globally for Microsoft Dynamics CRM Online subscriptions.

1. Access the link, https://portal.office.com/ and click on the '**Admin'** tile. User must be logged into the Office 365 Administrator account.
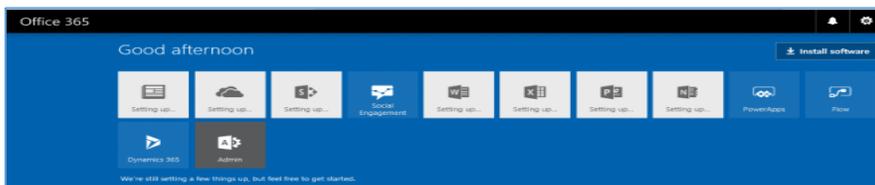
2. Click on **Admin Center** and select **Dynamics 365.**
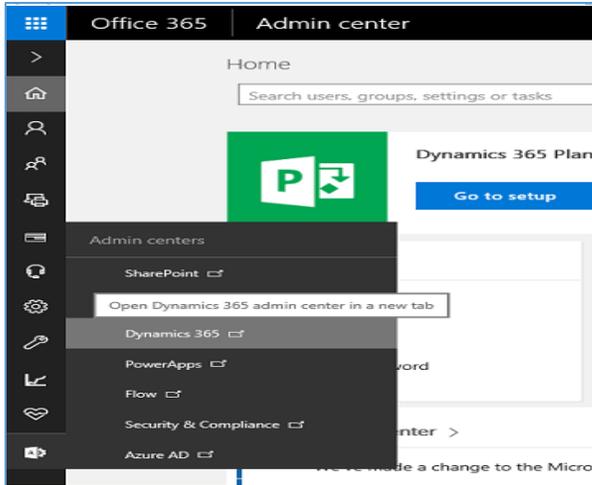
3. Select the instance (organization) for which you want to install **Voice of Cutomer** and click on the **Edit** button, next to Solutions.

4. Select the **Voice of the Customer** and click on **Install.**
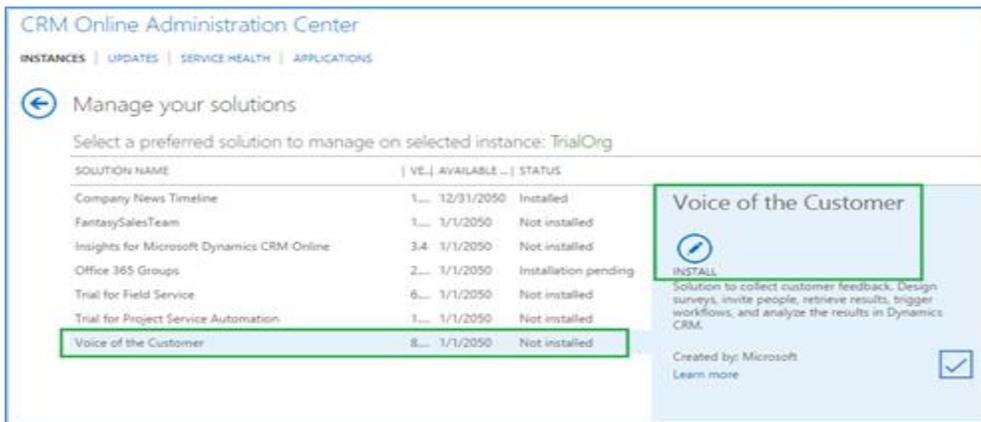
Note: When a solution is installed in CRM, the CRM Online site goes into maintenance mode and will be offline for a short period of time. It is advisable to install the solution in outside office hours.

2.5 CRM Hub Installation

To enable UCI client and related features, end user need to install CRM Hub Installation.

1. Go to https://portal.office.com/ and click on the '**Admin'** tile. User must be logged into the Office 365 Administrator account.
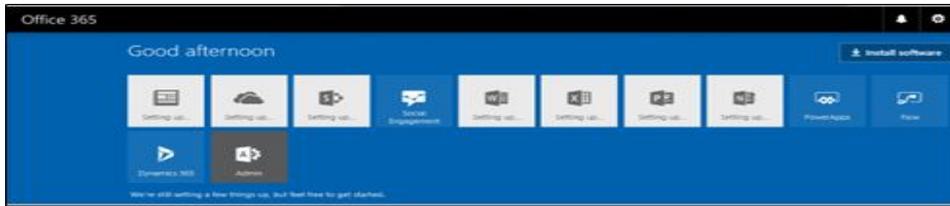
2. Click on 'Admin Center' and select 'Dynamics 365'.
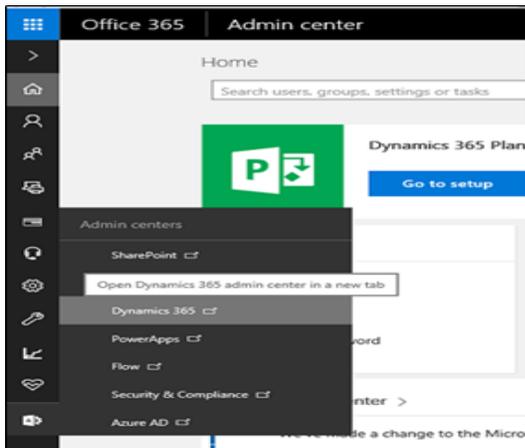
3. Select the instance (organization) for which you want to install 'CRM Hub' and click on the 'Edit' button, next to Solutions.

4. Select **'Crm Hub'** from the list and click on the '**Install'** button.
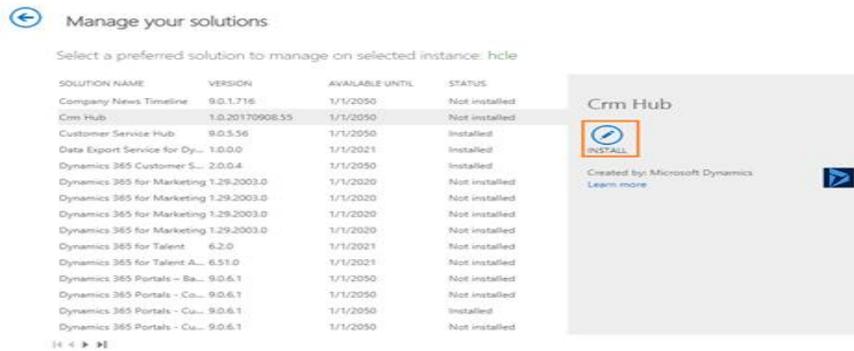
5. Click on '**Install'** button in the pop-up.

Terms of service

Microsoft Corporation (or based on where you live, one of its affiliates) licenses this supplement to you. You may use it with each validly licensed subscription of Microsoft Dynamics CRM Online or Microsoft Dynamics 365 services (the "online service"). You may not use the supplement if you do not have a license for the online service. The license terms for the online service apply to your use of this supplement. Microsoft provides support services for the supplement as described at https://support.microsoft.com/common/international.aspx. This supplement enables authorized users to access the online service by means of the companion Field Service mobile applications for Microsoft Dynamics 365 (the "App"), which users need to install and license separately.

IMPORTANT: By installing this supplement, (1) you consent to share addresses with an external system (Bing Maps) to locate addresses on a map and determine distance and travel time between locations, this supplement overrides your command on the admin System Settings to disable Bing Maps, please consult Bing Maps technical documentation for more information; and (2) you consent to allow authorized users, accessing the online service, to instruct the App to:

    a) Transmit addresses to the third party mapping service provider

cancel   install   By clicking install/upgrade you are agreeing to the above terms of service agreement.

6. The Status changes to **'Installed'.**

7. Navigate to Dynamics 365 CRM Organization to verify and validate if the Managed solution for the "Crm Hub" is installed with the above steps.

## 2.6 Portal Installation and Configuration

A portal is an independent running application that exposes specific CRM data and functionality to the respective users. It can be leveraged to model business processes that aren't easily modeled inside CRM or to provide a higher level of integration between your CRM and your clients. Users can range from full CRM users to external clients with minimal rights and access. Below is the step by step process to install and configure the portal:

1. Go to https://portal.office.com/ and click on the '**Admin'** tile. User must be logged into the Office 365 Administrator account.
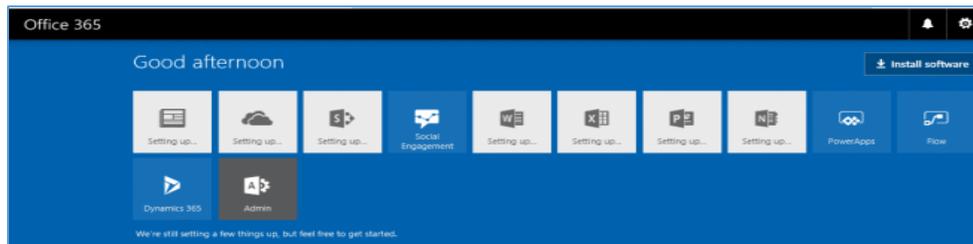
2. Click on 'Admin Center' and select 'Dynamics 365'.
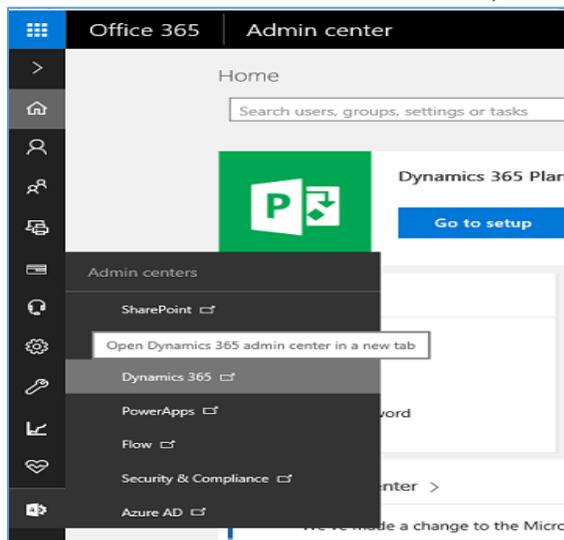
3. Select the instance (organization) for which you want to install 'Custom Portal' and click on the '**Edit**' button, next to Solutions.
4. Select '**Custom Portal**' from the list and click on the '**Install**' button.

5. Click on '**Install**' button in the pop-up.

6. The Status changes to **'Installed'.**

7. Navigate to Dynamics 365 CRM Organization to verify and validate all the Managed solution for the Custom portal installed with the above steps.

8. Access the website https://portal.office.com, select **'Admin Center'** and **'Dynamics 365'** and click on '**Application'** tab.
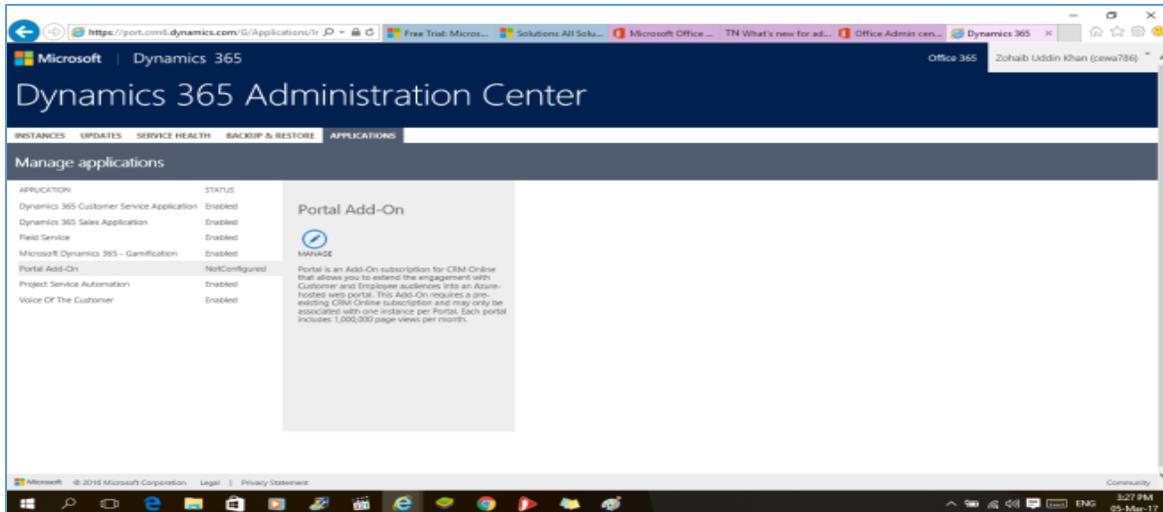
9. On the '**Configure your Portal'**, enter the necessary information. Enter the below details:
    a. Name, URL for the portal
    b. **Portal Audience**: Customer
    c. **Portal Binding**: Custom
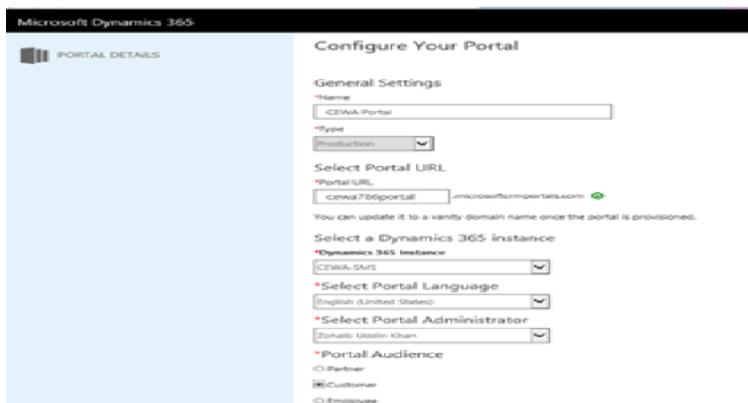
10. Click on '**Accept'** in the Permissions pop up for Dynamics 365 Portal.
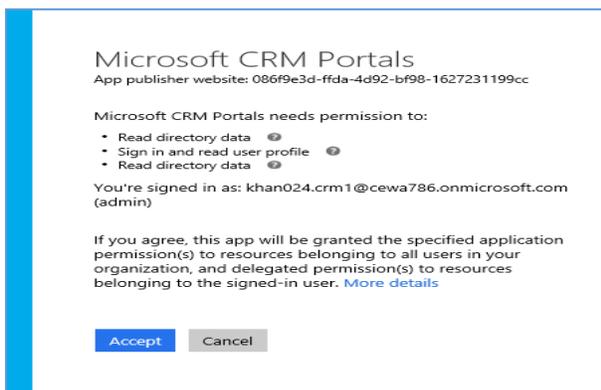
11. Navigate to 'Portal Details'. As appearing in the below message, it might take time to configure the portal, check back in some time and the 'Custom Portal' will be ready for use.
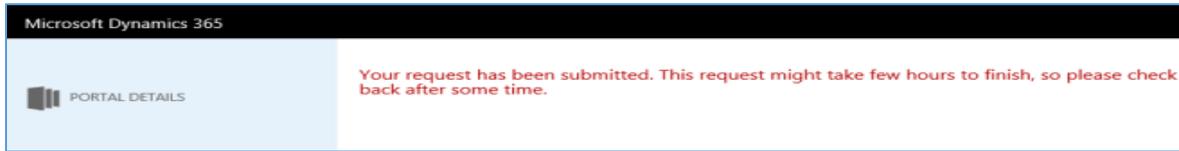
12. Once the portal set up is complete the page wil display the below set of options.
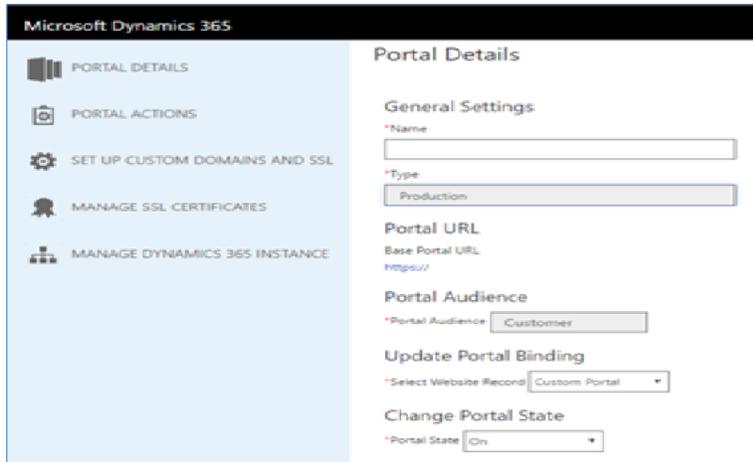
13. Click on the 'Base Portal URL', a new window will open and the Dynamics 365 Custom Portal is ready for Branding.
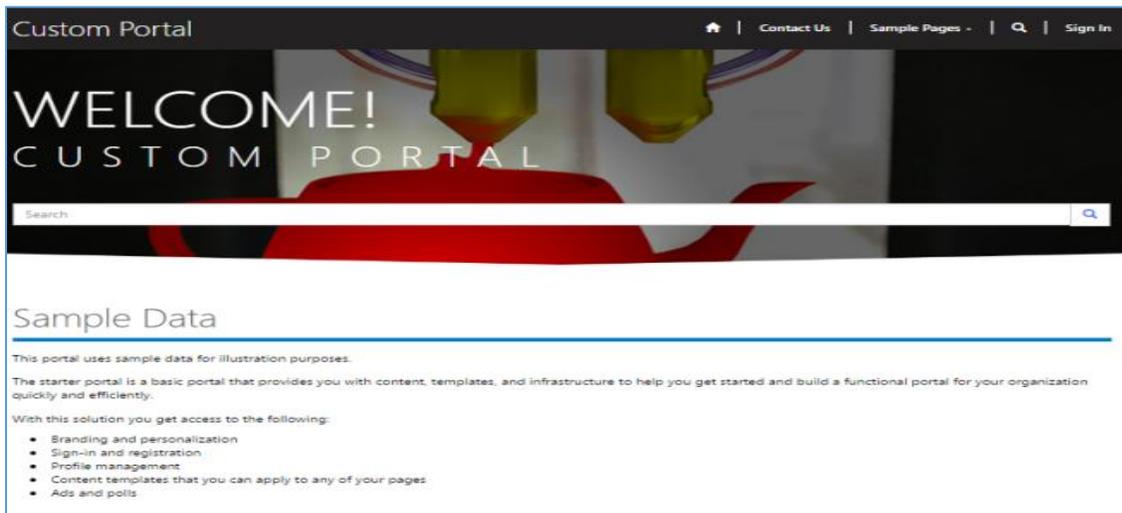
2.7 System Settings

As a part of deployment process, the following changes are required in the general tab of system setting. To access system settings, navigate to Setting - > Administration - > System Settings:
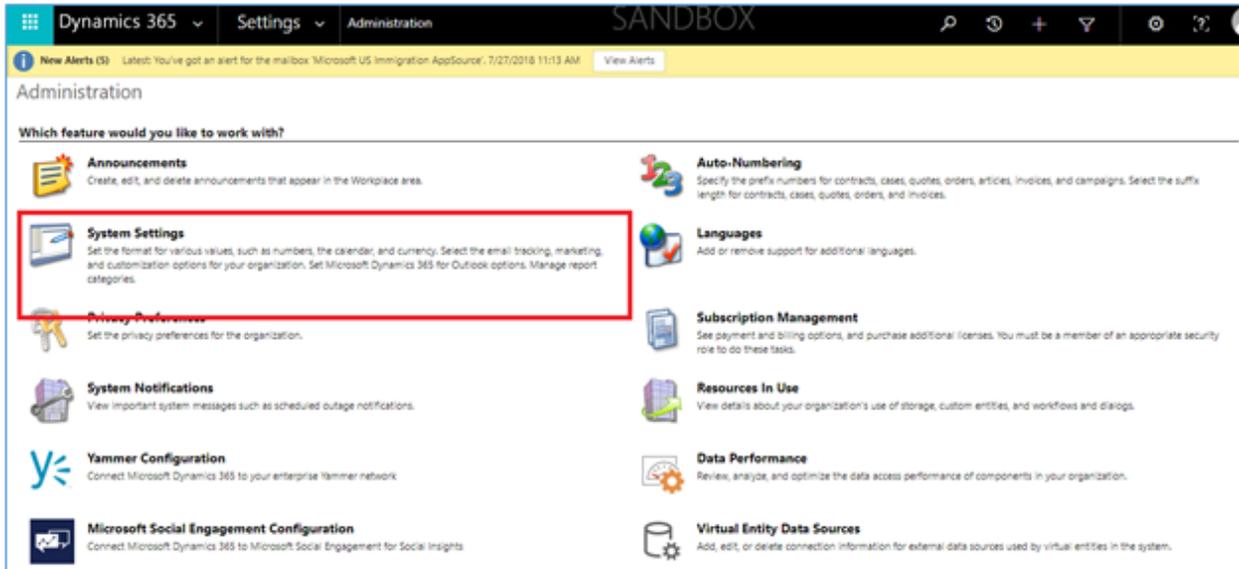
Navigate to general tab - > Set blocked extensions for attachments. Remove JS from the extensions.
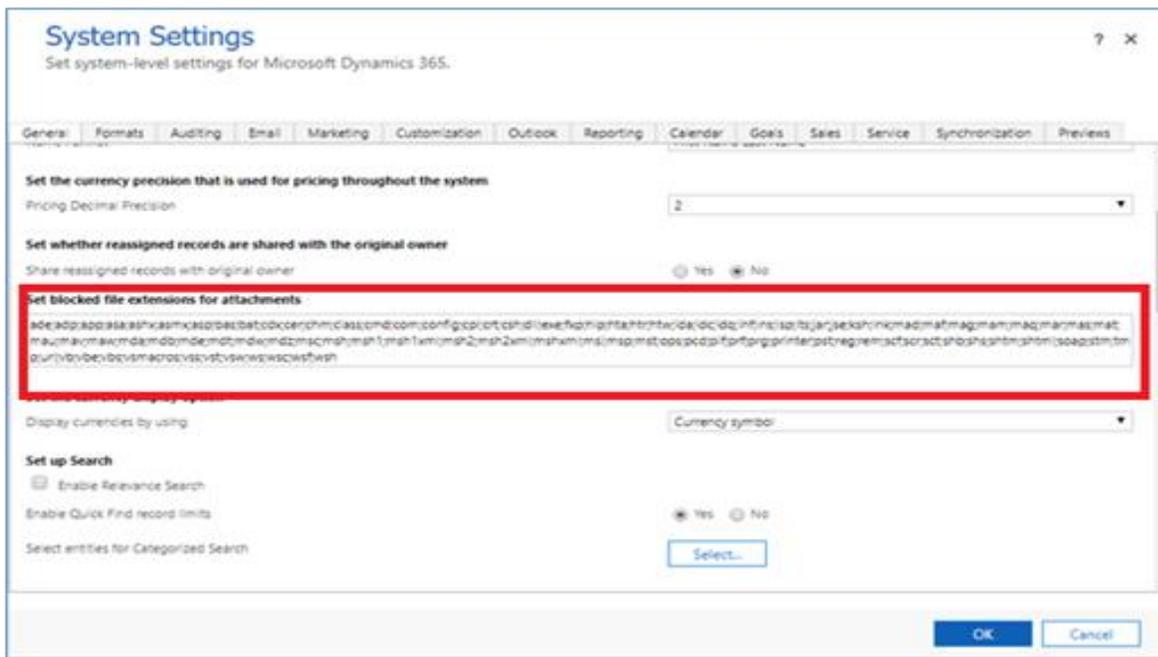
2.8 Group Policy Set up

Below settings are required to run the script and power shell commands for setting up IMS Apps from Package deployer

- Execute the "**gpedit.msc**" in windows run and open the Group Policy Settings as shown in the below screenshot.
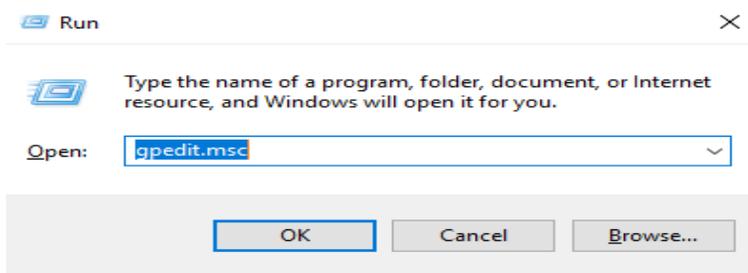
- Click on Ok
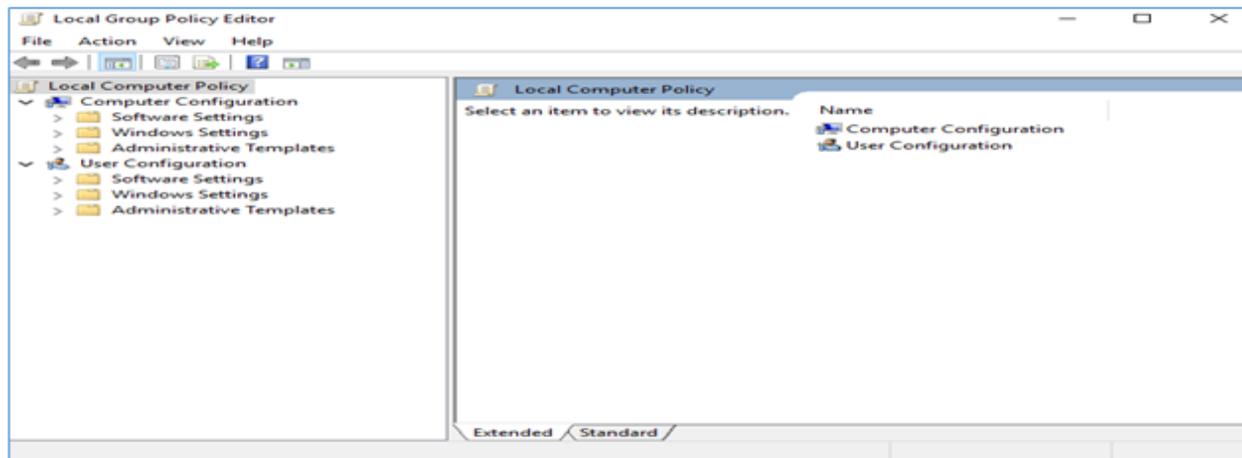
- Navigate to Computer Configuration -> Administrative Templates ->Windows Components -> Windows PowerShell as shown below
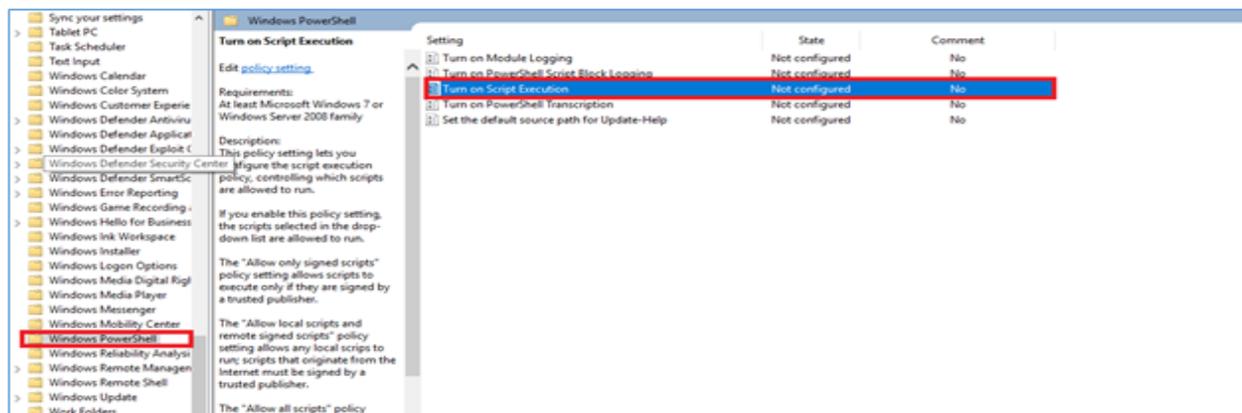
- Open "Turn on Script Execution" and change the settings as shown below
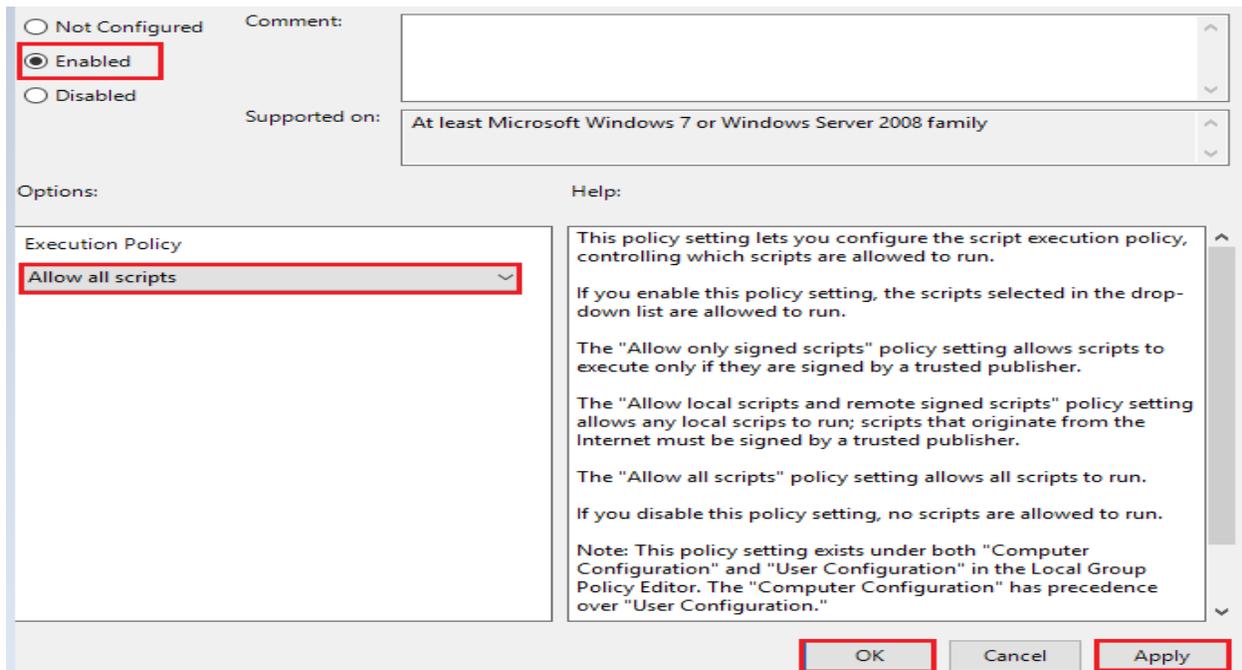
- Now the script execution state changes from Not configured to Enabled as shown below
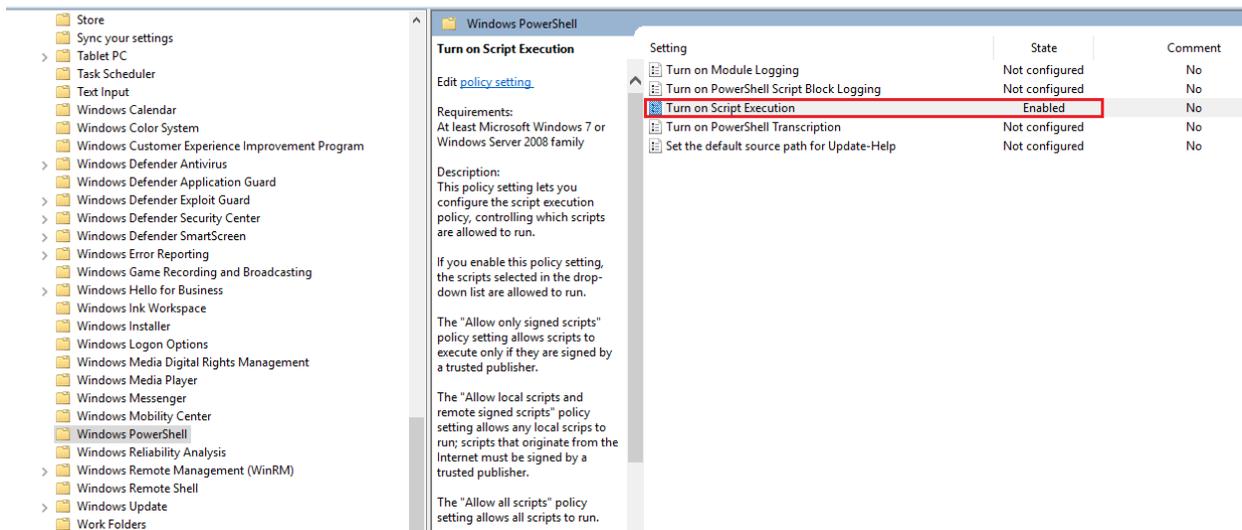
2.9 Windows PowerShell

- Open PowerShell window from windows as shown below
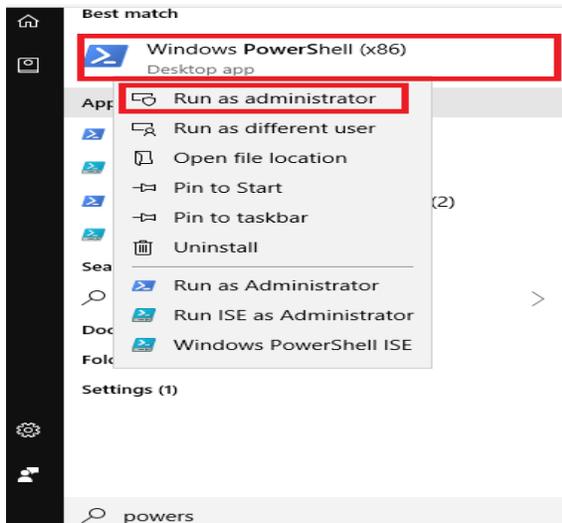
- It opens the below PowerShell window

- Run the below Commands

"Set-ExecutionPolicy RemoteSigned" as shown below
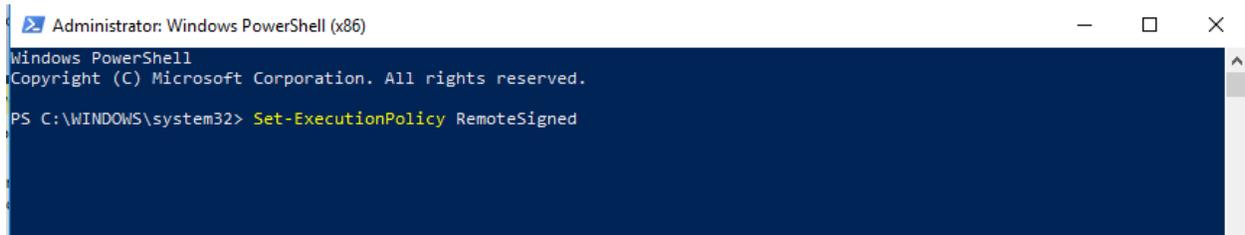
- The following question appears on screen, "Do you want to change the execution policy" type "Y" and click enter
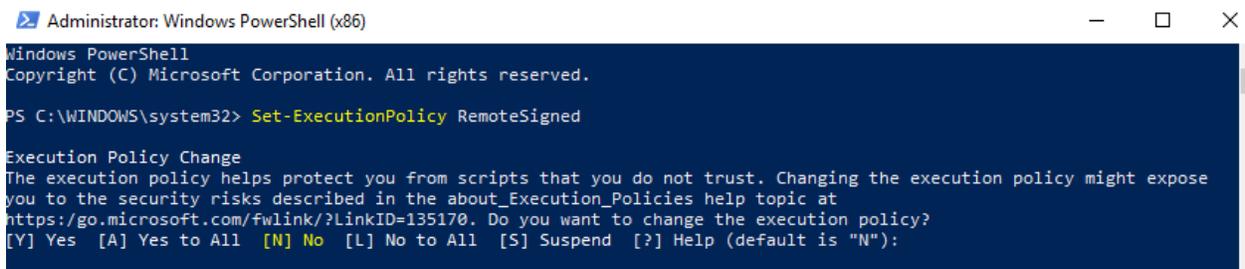
- Run the command "Install-Module AzureRM" as shown below

- Type "Y" and click enter
- Run the command "Import-Module AzureRm" as shown below

- Wait to execute the import module azureRM until shows the next line as shown below

2.10 Azure Setup

Use the below link to get more information about the azure subscription

https://azure.microsoft.com/en-in/features/azure-portal/

- Login to azure portal using https://portal.azure.com
- Sign-In to portal using service admin/co-admin role

How to get the Subscription Id ?

- Search for Subscriptions like showing below .
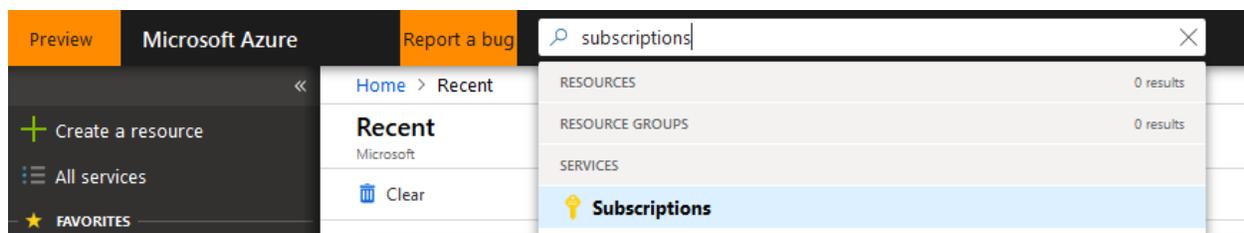
- Select the required subscription from the list below
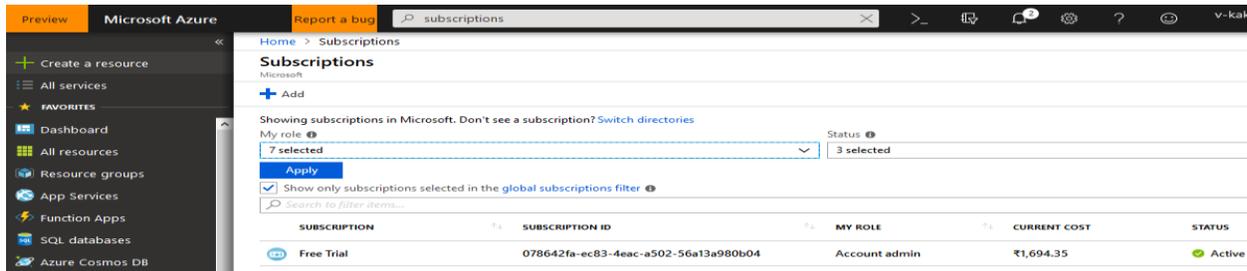
- On click of the subscription we can find the subscription id
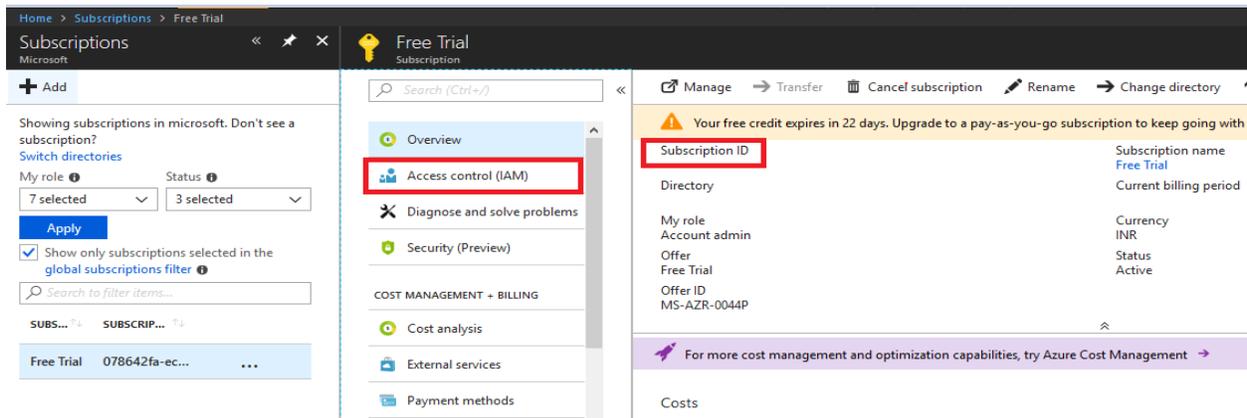
How to find Login User role/Powershell script executing user role ?

- Click on Subscription name and select AccessControl(IAM) from left navigation links
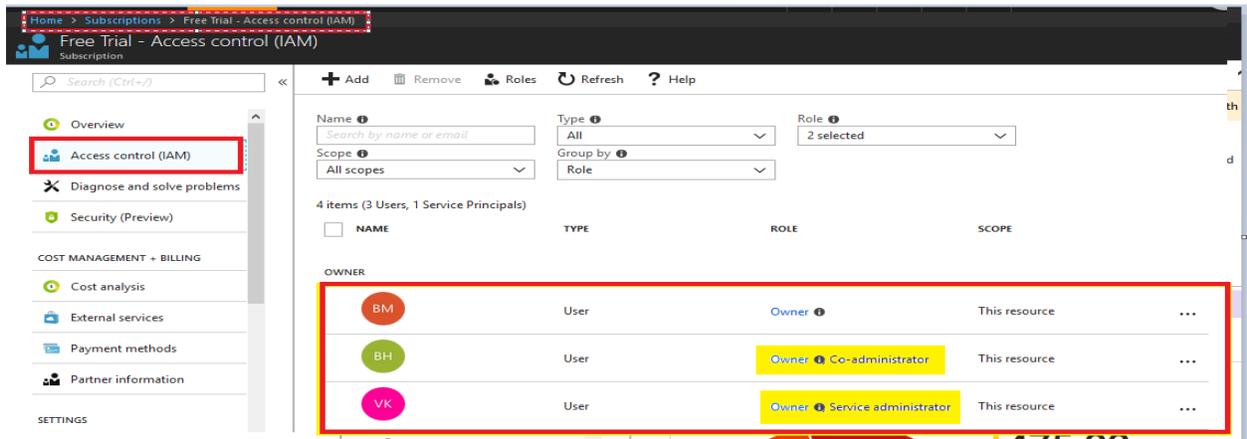
- Find the user and his roles like above (powershell script executing user has to be under co-admin/service admin role)

How To find the Resource Group ?

- Click on Subscription name and select ResourceGroups from left navigation links

3. Install IMS App Package

Alert: This solution import may impact any of the existing CRM functionalities already there in the system. It is advised to do this on New/Vanilla instance of CRM.

- Go through the below link and click on "GET IT NOW" as shown below
  https://appsource.microsoft.com/enus/product/dynamics365/microsoft_labs.d365immigrationmanagementsystem-preview?flightCodes=d365immigramtionmanagementsystem

- On Click on "GET IT NOW" shows below image

- Select the check box to agree the Microsoft terms and privacy policy , Also validate the organization username on which crm you are going to install the IMS App and Click on Continue will install the IMS App in your CRM as shown below.

- Solution import will take time from 60 – 90 minutes. Check if the below two solutions are installed:
  - IMSAPPSOURCE
  - IMSFORMSSOLUTION
- If only IMSAPPSOURCE solution is installed, Re-install the IMS App Package from the AppSource from the same link mentioned above.
- Once both the solutions are imported and available in solutions, Run the data executable available in GITHUB. Only New customers who are installing the IMS application for the first time need to run this data executable. **Customers who are upgrading the solution, should not run this**.

  Note: If existing customers, who already have installed the data run this data executable application, all the data will be Reset.

  Below are the entities for which data will be installed.
1. Queue
2. Business Process Flows
3. Business Process Flow Stages
4. Web Form
5. Web Form Step
6. Case Type
7. Questionnaire Configuration
8. Country
9. Email Template Staging
10. Master Forms
11. Master Case Configuration
12. Configuration Steps for Questionnarie
13. Business Unit
14. Category
15. Master Documents
16. Master Letters
17. Master Steps
18. Case Steps Config

19. Case Tabs Config
20. Configuration
21. Integrations Config
22. Master Attorney Configuration
23. US Embassy
24. Task Categories
25. Tags
26. Entity Form
27. Entity List
28. Web Template
29. Page Template
30. Web Page
31. Web File
32. Note
33. Site Marker
34. Site Setting
35. Content Snippet
36. Web Role
37. Entity Permission
38. Web Form Metadata
39. Entity Form Metadata
40. Team
41. Documents Config
42. Stage Queue Mapping

1. In case of any issues with above #1, run the executable provided in the GitHub (https://github.com/microsoftappsource/IMS/tree/master/IMSAppDataEXE), which will re-do the data import upsert operation.

Navigate to Downloaded "IMS-master" Folder -> IMSAppDataExe

C › Downloads › IMS-master › IMS-master › IMSAppDataEXE

| Name	File ownership	Date modified	Type	Size
IMSAppDataExecutable		15-10-2018 00:49	Application	22 KB
IMSAppDataExecutable.exe		15-10-2018 00:49	XML Configuratio...	1 KB
IMSAppDataExecutable.pdb		15-10-2018 00:49	Program Debug D...	28 KB
IMSAppDataExecutable.vshost		15-10-2018 00:49	Application	23 KB
IMSAppDataExecutable.vshost.exe		15-10-2018 00:49	XML Configuratio...	1 KB
MasterData		15-10-2018 00:49	XML File	14,158 KB
MasterDataUpdate		15-10-2018 00:49	File	46 KB
Microsoft.Azure.KeyVault.Core.dll		15-10-2018 00:49	Application extens	14 KB
Microsoft.Azure.KeyVault.Core		15-10-2018 00:49	XML File	7 KB
Microsoft.Crm.Sdk.Proxy.dll		15-10-2018 00:49	Application extens	274 KB
Microsoft.IdentityModel.Clients.ActiveDi...		15-10-2018 00:49	Application extens	187 KB
Microsoft.IdentityModel.Clients.ActiveDi...		15-10-2018 00:49	Application extens	50 KB
Microsoft.Xrm.Sdk.Deployment.dll		15-10-2018 00:49	Application extens	91 KB
Microsoft.Xrm.Sdk.dll		15-10-2018 00:49	Application extens	519 KB
Microsoft.Xrm.Tooling.Connector.dll		15-10-2018 00:49	Application extens	211 KB

- Open the "IMSAppAzurePackage" Application shown in above image will run the application as shown below

E:\Bharat\MIMS AppSource\Package\IMSAppDataExecutable\IMSAppDataExecutable\bin\IMSAppDataEXE\IMSAppDataExecutable.exe

```
Enter the Organisation Url - https://     .crm.dynamics.com/XRMServices/2011/Organization.svc
Enter the UserName - test@23    3.onmicrosoft.com
Enter the PassWord - pass@word1
```
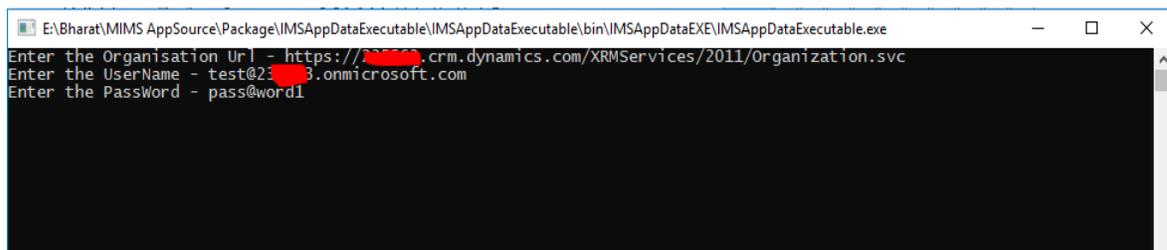
- Enter the **Organization Service URL, UserName and PassWord** of **CRM**

Organization URL

Navigate to CRM -> Settings -> Customizations ->Developer Resources

Dynamics 365 ∨   Settings ∨   Customizations

Apps for Dynamics 365   View Dynamics 365 information on the go with apps for your phone, tablet, Outlook, and more!   Get Apps for Dynamics 365

Developer Resources

Getting Started

Developer Center   Developer Forums   SDK NuGet Packages

SDK Download   Sample Code   Developer Overview

Connect your apps to this instance of Dynamics 365

Instance Web API
HTTP REST API providing access to this instance of Dynamics 365. For more information see Microsoft
Dynamics 365 Web API.

Service Root URL   https://   api.crm.dynamics.com/api/data/v9.0/

Download OData Metadata

Organization Service
SOAP Service providing access to this instance of Dynamics 365. For more information see Use the
IOrganizationService web service to read and write data or metadata.

Endpoint Address   https://   api.crm.dynamics.com/XRMServices/2011/Organization.svc

Download WSDL

Instance Reference Information
Use this information to uniquely identify this instance of Dynamics 365. You can use this to retrieve the

Creating the records In CRM as shown below and closes the application once the records are created in CRM

4. Download IMS App Azure Components

- Go through the below link

    https://github.com/microsoftappsource/IMS

- Download the components as shown below
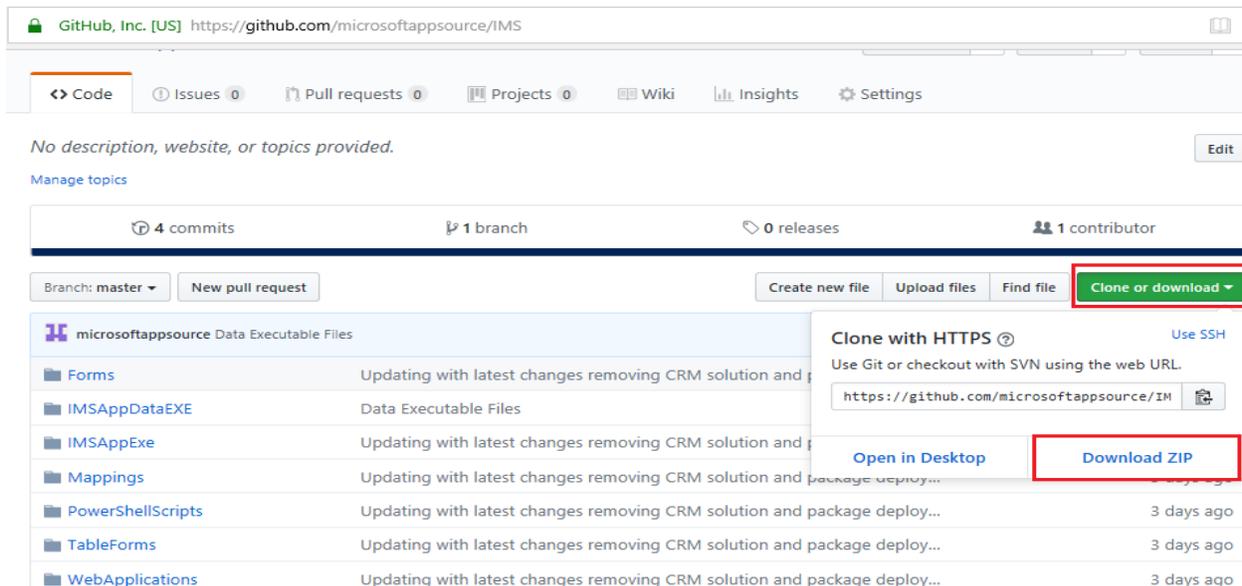
- Unblock the zip file which you downloaded from github as shown below
- Navigate to Zip File -> Properties
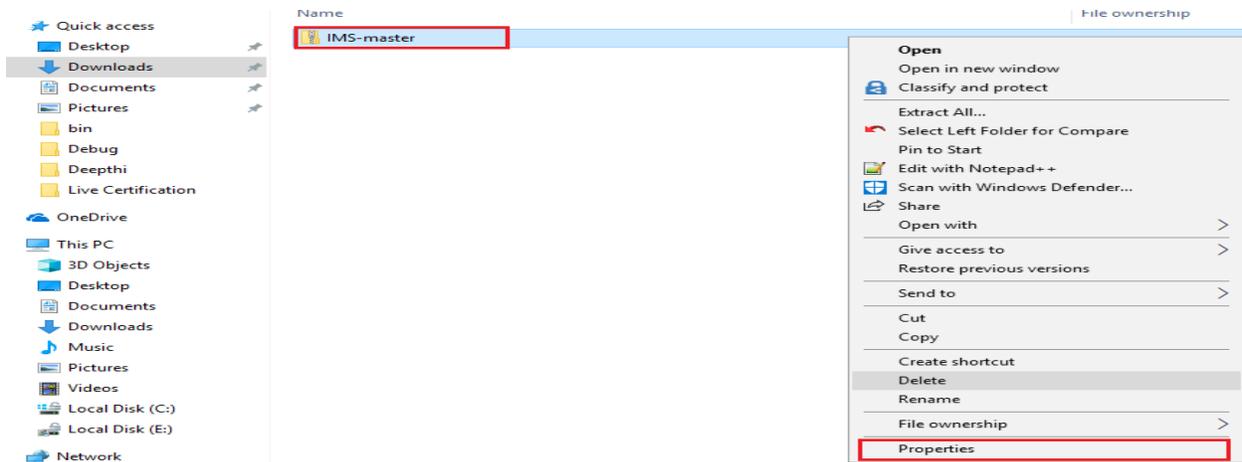
- Click on Properties and check the unblock checkbox and click on "Ok"as shown below
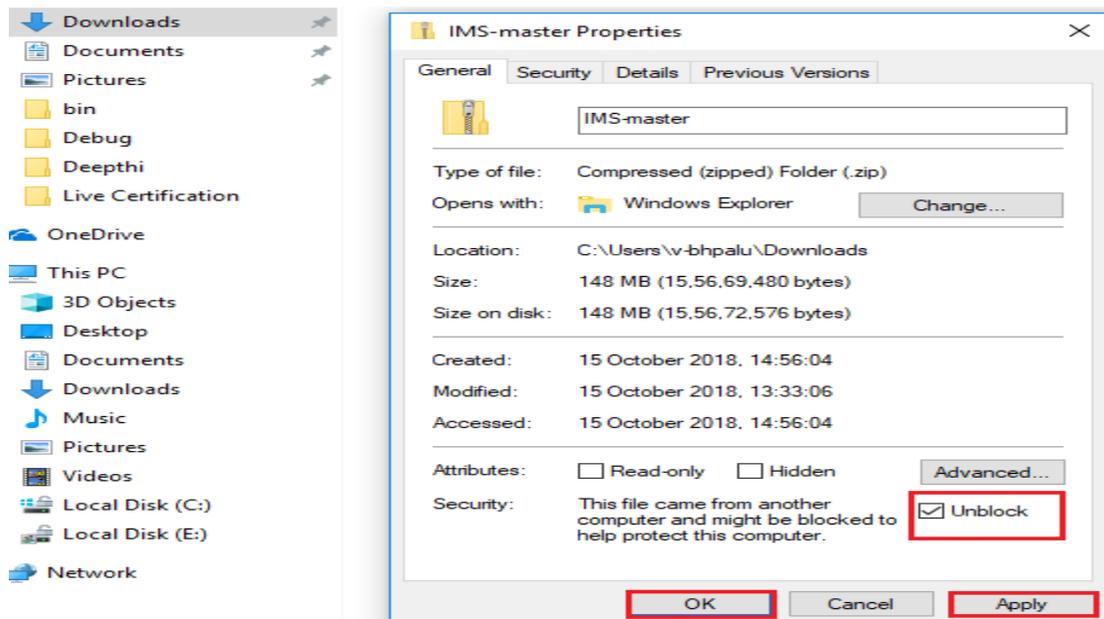
- Extract the folder which contains all the IMS App Components
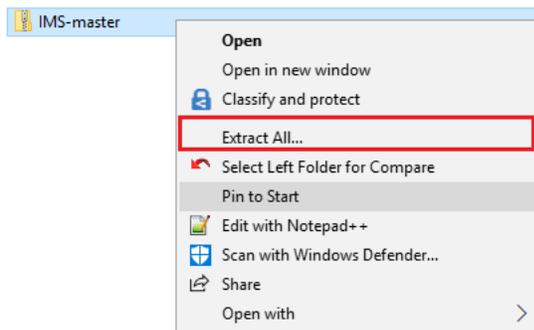
- Open the "IMS-master" Folder and find the "PreInformationData.xml" File and Open as shown below.
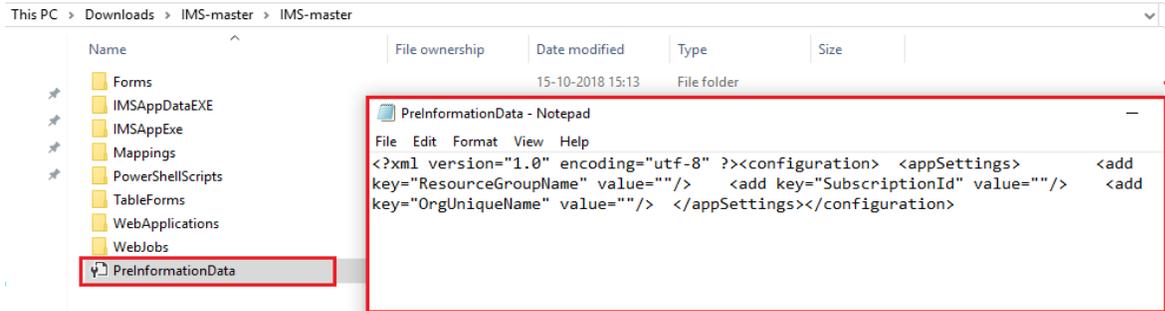
Enter the ResourceGroup , SubscriptionId and Organization UniqueName as shown below

How to get Organisation Unique Name ?

- In CRM Navigate to Settings - > Customizations -> Developer resources as shown below:
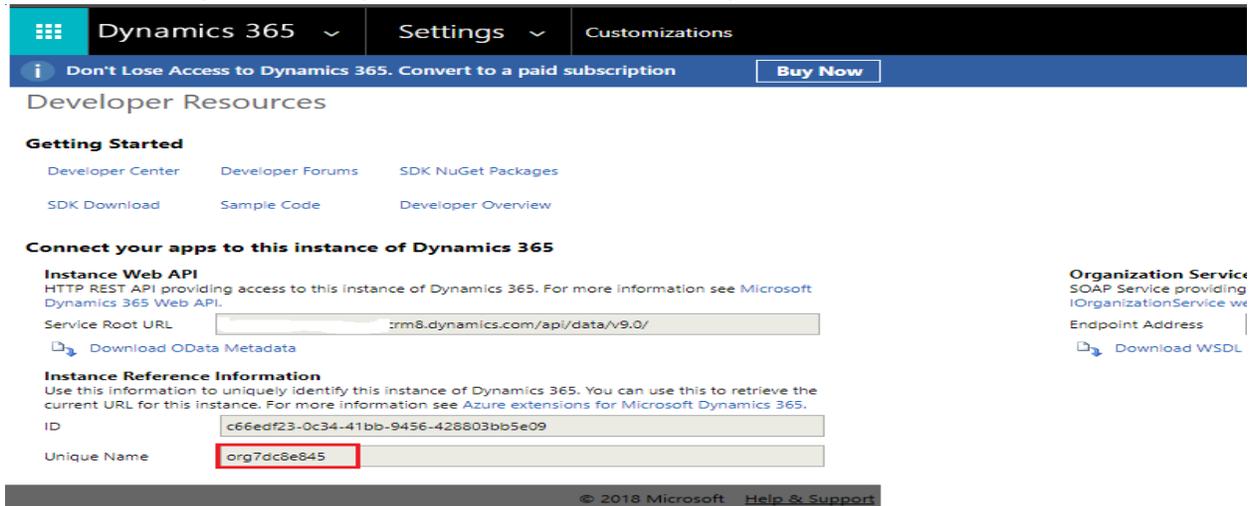
- Resource Group Name and Subscription Id are mentioned in 2.10 Azure Setup
- Mention the "ResourceGroupName" , "SubscriptionId" and Organisation uniqueName as shown below image

- Update the above file with Resource Group,SubscriptionId ,Organization Name values save and close the file.

- Open the folder "IMS-master" and Open the folder "IMSAppExe" and Run the "IMSAppAzurePackage" as shown below
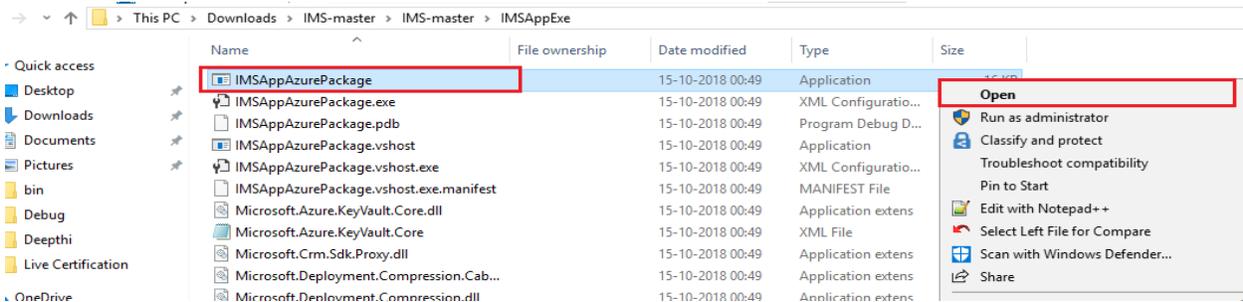
- Open the IMSAppAzurePackage Application will shows the command prompt as shown below
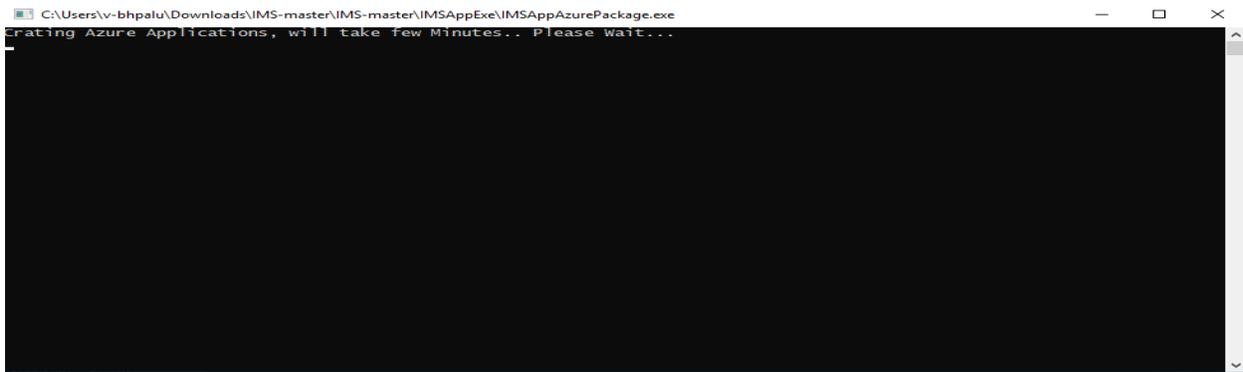
- And prompt you an azure login window as shown below
- Login to azure using service admin/co-admin role to deploy web applications

- Enter the azure UserName and click on Next shows below screen

Microsoft

Sign in to your Microsoft Corporate account

[   ]

[●●●●●●●●   ]

Sign in

You may receive a phone call or app notification or OTP code
to complete sign in. Locate your phone before clicking Sign in.

Sign in with PIN or smartcard instead

Sign in as current user
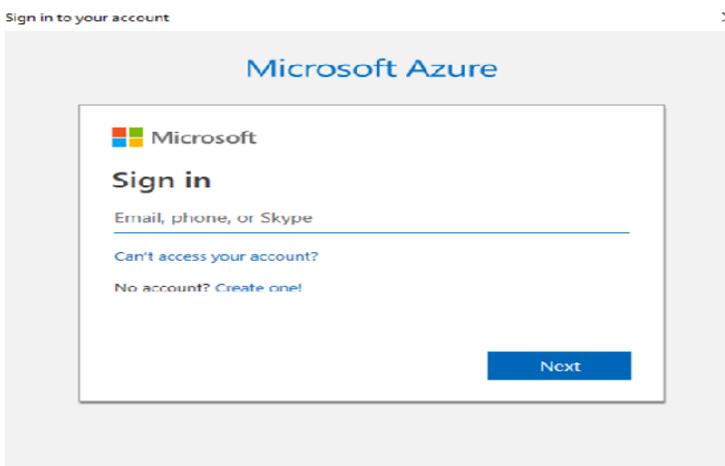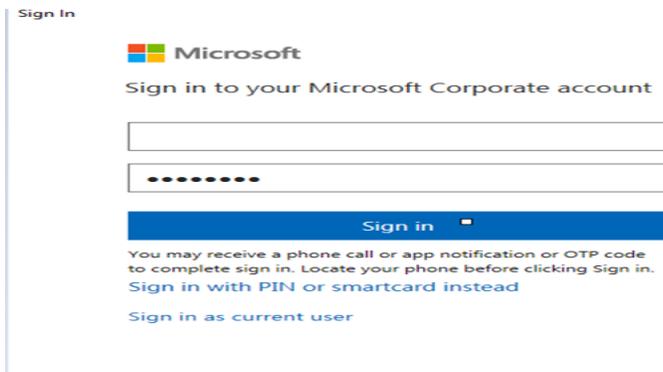
- After Azure login was successful, It creates the WebApplications in azure takes some time and shows the below screen

C:\Users\v-bhpalu\Downloads\IMS-master\IMS-master\IMSAppExe\IMSAppAzurePackage.exe

```
Crating Azure Applications, will take few Minutes.. Please Wait...
Publishing Azure Applications...
```
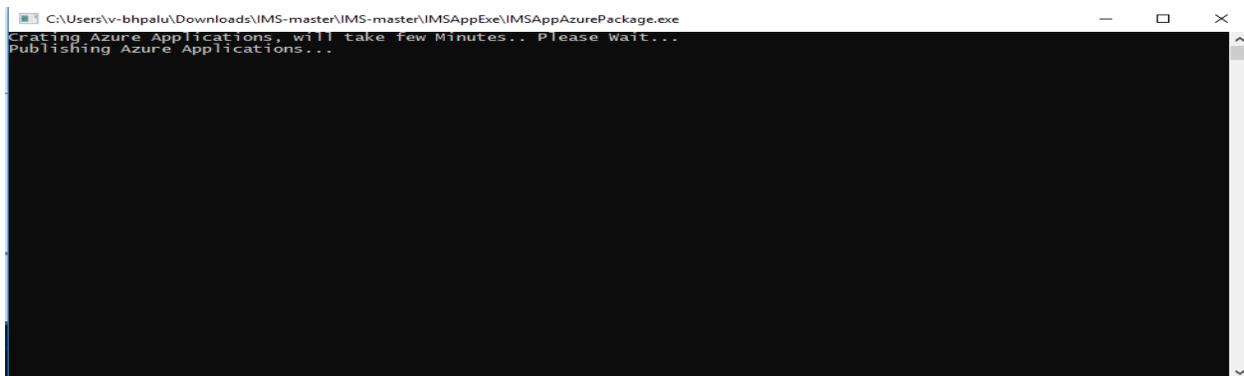
- In Order to Publish the Azure Web Applications, again asks you to login azure as below
- Login to azure using service admin/co-admin role to deploy web applications

Sign in to your account

Microsoft Azure

Microsoft

Sign in

Email, phone, or Skype

Can't access your account?

No account? Create one!
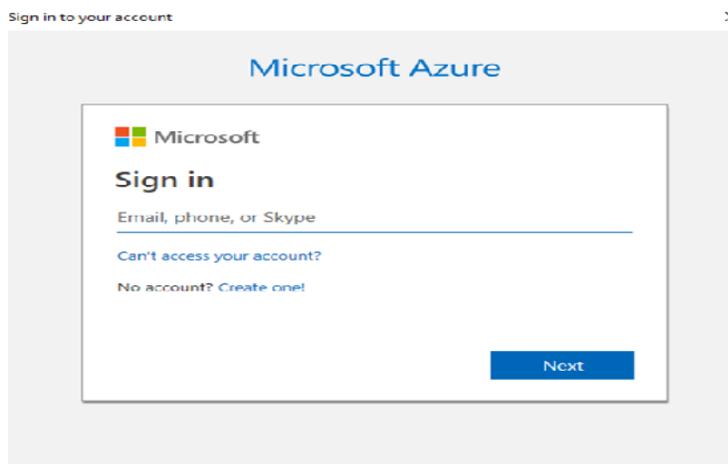
Next

- Enter the azure Username and click on Next shows below screen

- After completing the azure Login , azure components will be published

Below applications will be created in azure

Note: If your organization name is "org123456789" then <xxxxx> will <12345>

App Service plan

1) IMSAppServicePlan

   This is the Appservice Plan for all the azure components.

WebApp

2) "IMSAppPrintAll<xxxxx>"

   This is used to download multiple extension document files and convert them to single pdf.

3) "IMSAppBinder<xxxxx>"

   This is used to download selected files and convert them into single pdf in user defined sequence.

4) "IMSAppForms<xxxxx>"

   This is used to Populate data into forms from CRM and portal.

5) "IMSAppWebJob<xxxxx>"

   This app is placeholder for all the web jobs required to update data back in CRM.

Storage Account

6) "imsappformstrg<xxxxx>"

   This holds all the forms and mappings on the blobs and maintain forms, form versions and form version history under tables.

forms
Container

- Overview
- Access Control (IAM)

Settings
- Access policy
- Properties
- Metadata

⬆ Upload   🔄 Refresh   🗑 Delete   ⟐ Acquire lease   ⟐ Break lease   👁 View snapshots   📋 Create snapshot

🚀 Azure now supports using Role-Based Access Control (RBAC) to manage access to blobs. Learn more. ➜

Location: forms

Search blobs by prefix (case-sensitive)   ☐ Show deleted blobs

NAME	MODIFIED	ACCESS TIER	BLOB TYPE	SIZE	LEASE STATE
023c906c-600d-4a3a-80d9-260a3660f5ec.pdf	10/15/2018, 4:11:29 PM		Block blob	874.75 KiB	Available
0252360b-7a8c-45c3-a224-4fdef598a534.pdf	10/15/2018, 4:11:30 PM		Block blob	410.54 KiB	Available
03fec6e6-d0cb-4036-99f6-b3d15f96f087.pdf	10/15/2018, 4:11:32 PM		Block blob	321.15 KiB	Available
05dbbc31-2db9-43d4-96b7-8f6d76e48653.pdf	10/15/2018, 4:11:33 PM		Block blob	202.48 KiB	Available
06da2ee9-4653-4bf7-91fc-3d03466a4b8b.pdf	10/15/2018, 4:11:34 PM		Block blob	569.03 KiB	Available
0da4119b-f539-4c61-b63e-812ba8e96390.pdf	10/15/2018, 4:11:36 PM		Block blob	298.04 KiB	Available

mappings
Container

- Overview
- Access Control (IAM)

Settings
- Access policy
- Properties
- Metadata

⬆ Upload   🔄 Refresh   🗑 Delete   ⟐ Acquire lease   ⟐ Break lease   👁 View snapshots   📋 Create snapshot

🚀 Azure now supports using Role-Based Access Control (RBAC) to manage access to blobs. Learn more. ➜

Location: mappings

Search blobs by prefix (case-sensitive)   ☐ Show del

NAME	MODIFIED	ACCESS TIER	BLOB TYPE	SIZE	LE
023c906c-600d-4a3a-80d9-260a3660f5ec.txt	10/15/2018, 4:12:43 PM		Block blob	84.49 KiB	A
0252360b-7a8c-45c3-a224-4fdef598a534.txt	10/15/2018, 4:12:44 PM		Block blob	23.12 KiB	A
03fec6e6-d0cb-4036-99f6-b3d15f96f087.txt	10/15/2018, 4:12:45 PM		Block blob	10.56 KiB	A
05dbbc31-2db9-43d4-96b7-8f6d76e48653.txt	10/15/2018, 4:12:46 PM		Block blob	22.88 KiB	A
06da2ee9-4653-4bf7-91fc-3d03466a4b8b.txt	10/15/2018, 4:12:47 PM		Block blob	47.85 KiB	A
0da4119b-f539-4c61-b63e-812ba8e96390.txt	10/15/2018, 4:12:48 PM		Block blob	8.83 KiB	A
0e3cb9ab-42cc-4631-87fe-80455b2004b5.txt	10/15/2018, 4:12:49 PM		Block blob	19.25 KiB	A

7) "imsappstorageacc<xxxxx>"

All the attachments saved in CRM documents are stored here.

KeyVault

8) "ImsAppKeyVaults<xxxxx>"

All the username passwords and sensitive information related to the organization will be stored here.

App Insight

9) "ImsAppInsight<xxxxx>"

It will maintain all the logs related to AppService storage account.

Note: Follow troubleshooting steps in case of any of the above applications failed during deployment.

5.Post Deployment Configuration

Below Plugin steps *"Run in user's context"* should change to **Admins User** (Person who is having system admin role) using plugin registration tool
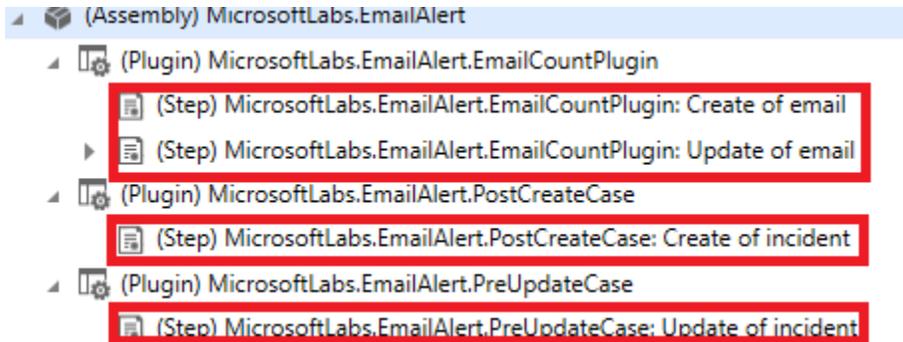
5.1 CRM Configurations

Adding portal URL in content snippet entity in Questionnaire record as shown below

- Navigate to CRM -> Portals -> Content Snippets
- Open "Questionnarie" record and update the value field as shown below
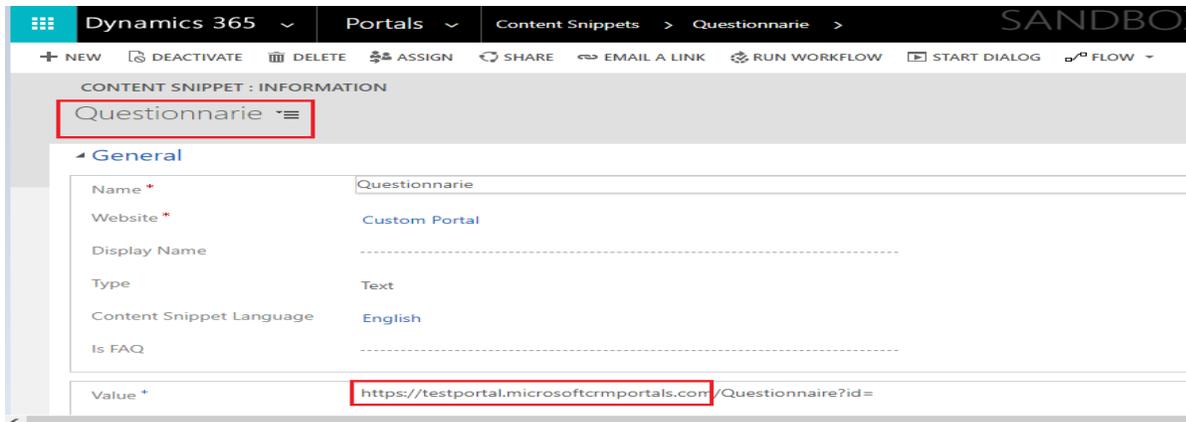
- Change the URL with your organization configured CRM portal as given below
  - **"CRM Portal URL"**/Questionnaire?id=
  - **Example**: https://<your portal >.microsoftcrmportals.com/Questionnaire?id=

Update "Integration Config"

- Navigate to CRM -> Settings -> IntegrationsConfig
- Open "OrgUrl" record and update the Config Value field with organization URL as shown   below

Queue and MailBox Configuration

Configure below queue and mailbox for all the communication through IMS CRM instance , update the Incoming mail with your organization email .

QR Code Update for Binder

- Create Word Template in CRM as shown below
- Navigate to CRM -> Settings -> Templates -> Document Templates
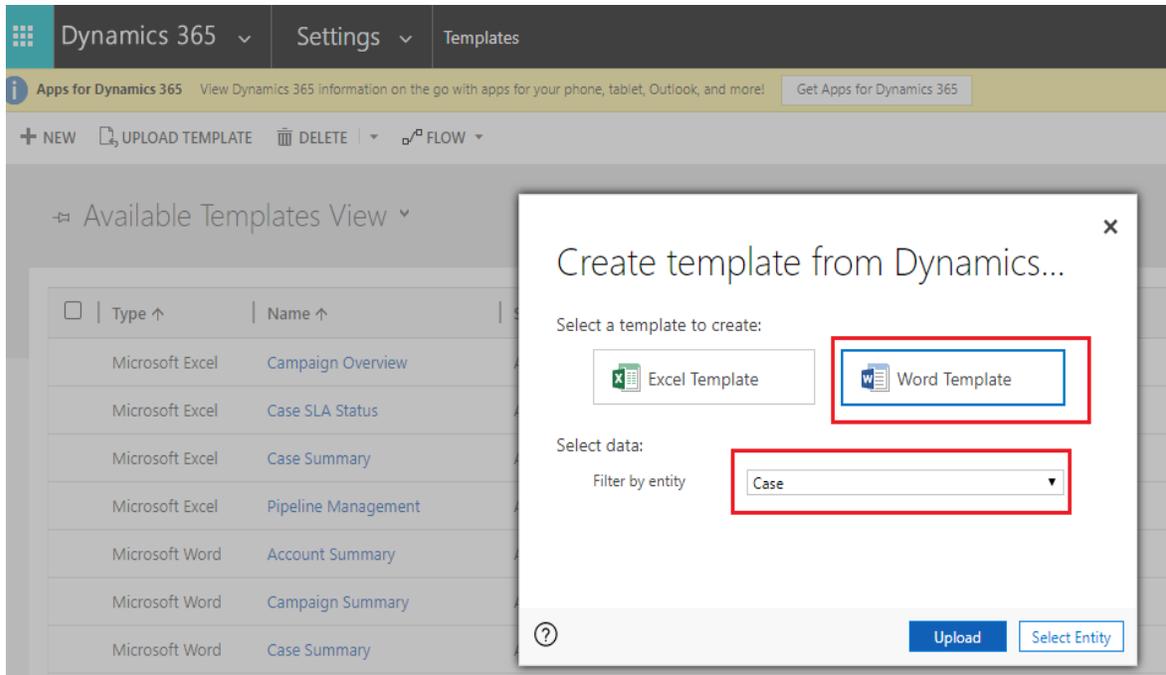
Download the QRCODE Document from the GITHUB
(https://github.com/microsoftappsource/IMS/tree/master/DocumentTemplates) and Upload the
document.

Workflow Activation:

Go to CRM settings → solutions → open "**IMSAppSourceV2**" → select "*processes*" under components as
shown in below screen.

Note all draft processes and now go to settings → processes and activate them.
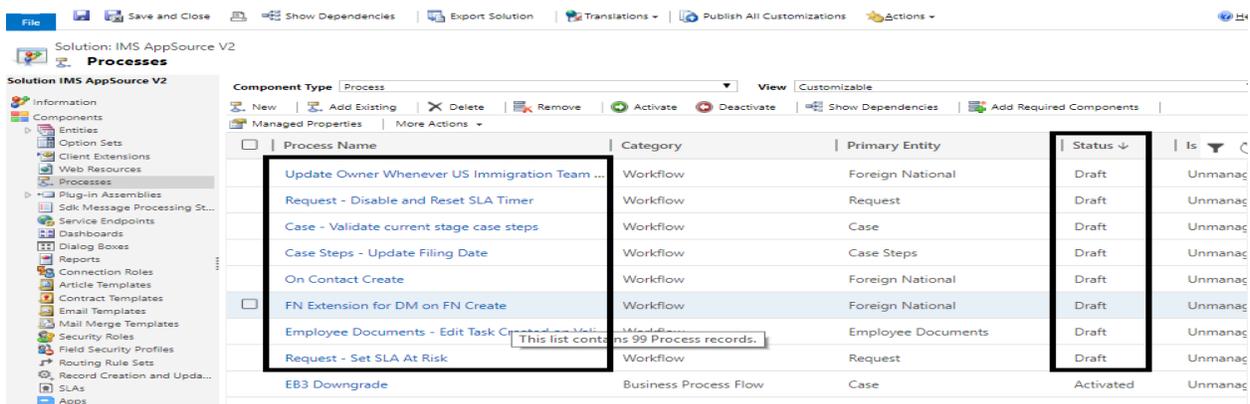
Activation of Workflows:

Please follow the below steps to activate the draft workflows.

1. On Contact Create:

1a. Click set Properties in the step which is showing error.
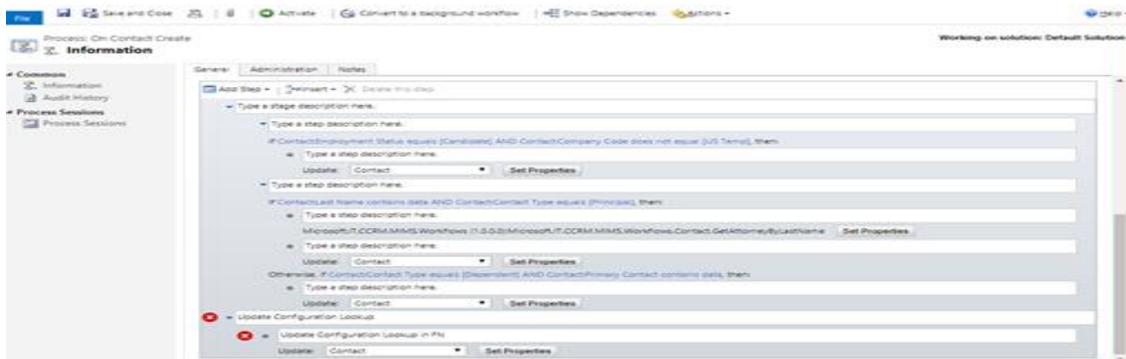
1b. Remove the value in the configuration field and add the value again.
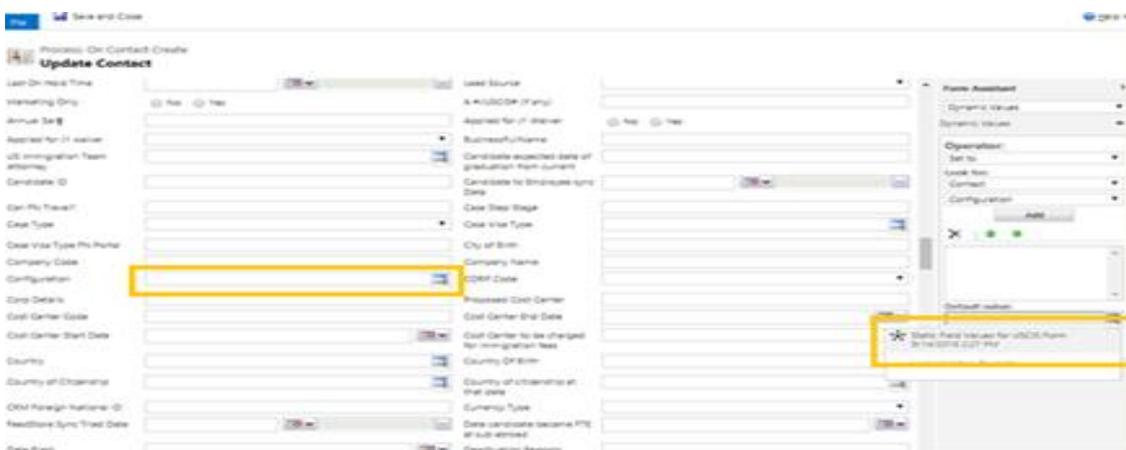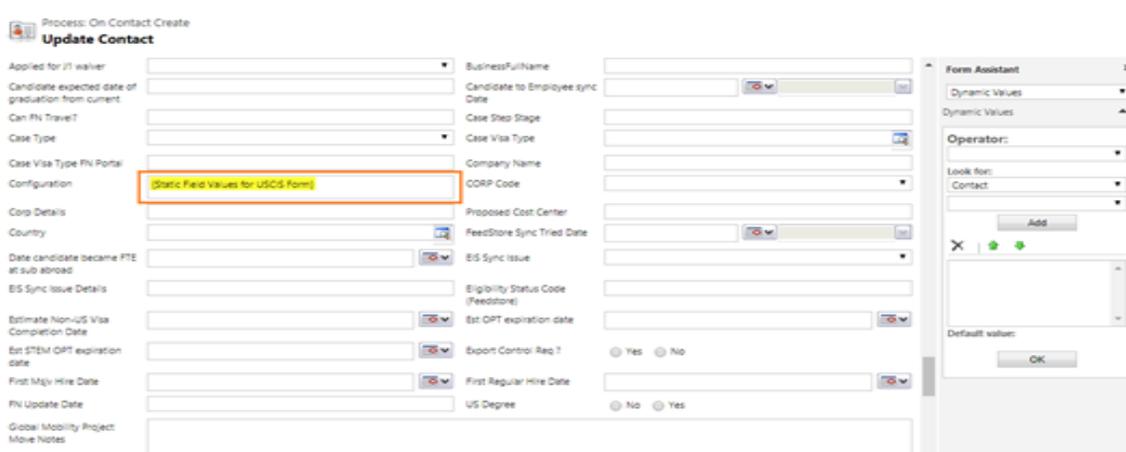
1c. Save and close the window after adding the value into configuration field.

1d. Activate the workflow.

2. Case - Update Case Type on Template name Update

2a. Click set Properties in the step which is showing error.

2b. Remove the value in the configuration field and add the value again.

2c. Save and close the window after adding the value into configuration field.

2d. Activate the workflow.

2. **Employee Documents - Assign Pending Status Documents To Integreon :**

3a. Click set Properties in the step which is showing error.
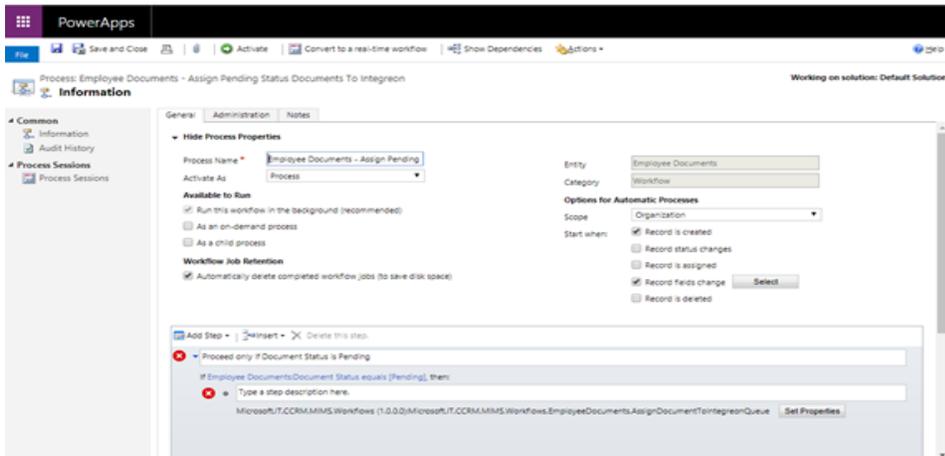
3b. Set the Value of the queue field to Process Team 1.
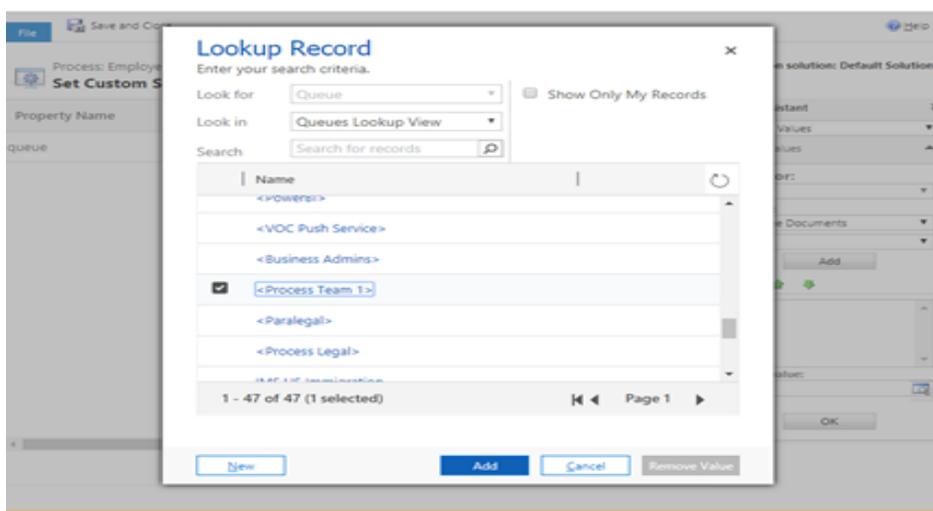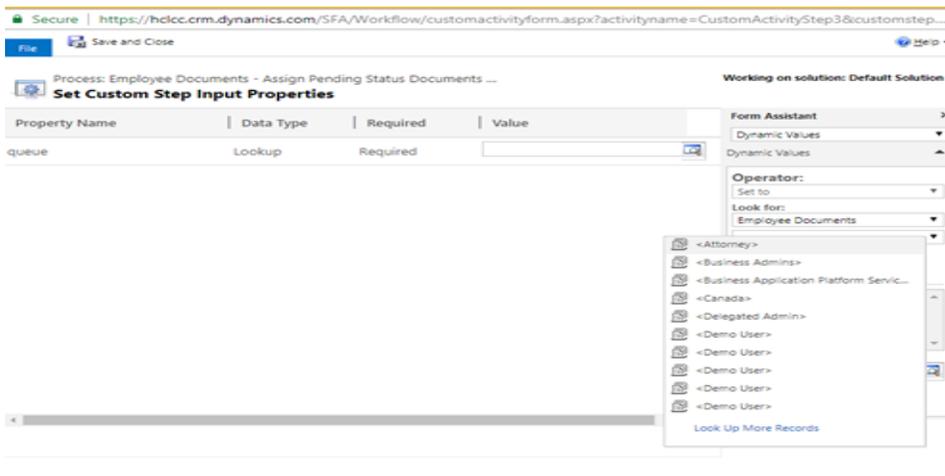
3c. Save and close the window, now the step should not show any error.

3d. Activate the workflow.

3. **Generate Letter Document from Word Template**

4a. Click set Properties in the step which is showing error. Save and close the window.
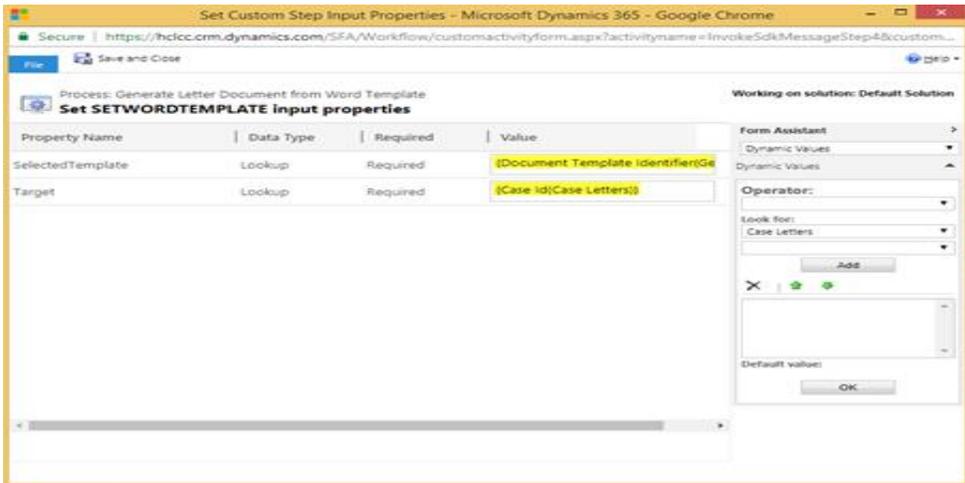
4b. Activate the Workflow
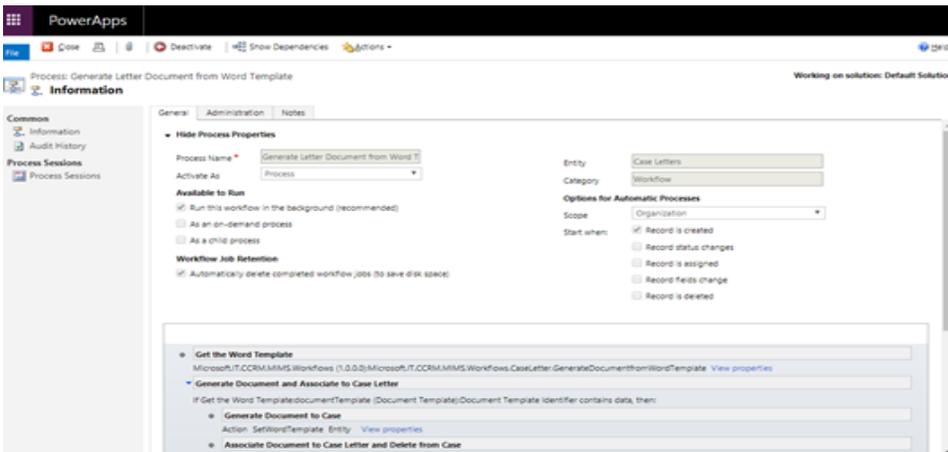
4. **Generate QR Document from Word Template**

5a. Click set Properties in the step which is showing error.
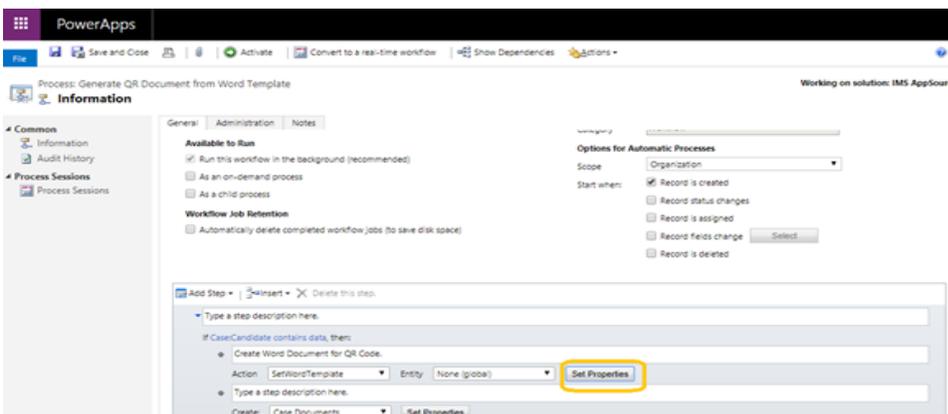
5b. Check if the selected template is QRCODE, If it is not filled fill it with QR code.

5c. Save and close the window.

5d. Activate the workflow

6) **Send Invitation**

6a. Open "Set properties" of Update FN Portal role step.
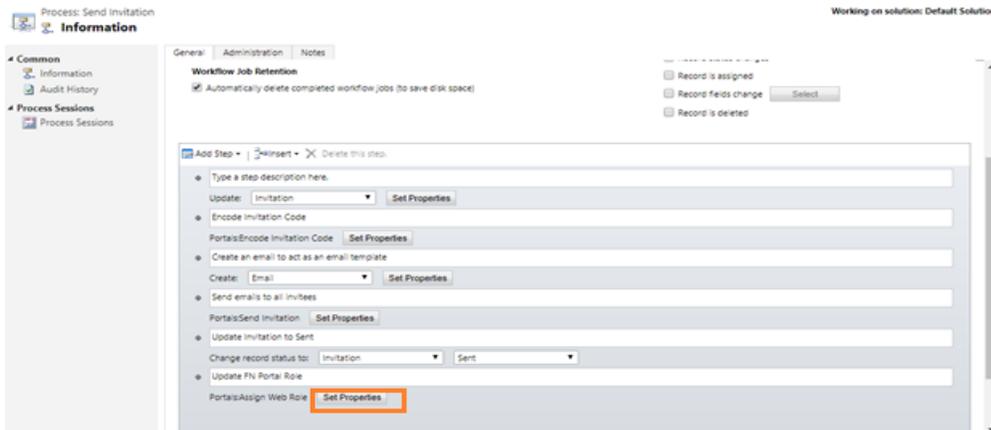
6b. Check if the web role field is filled. If not, set the field to "IMS Portal Admin". Save and close the form.
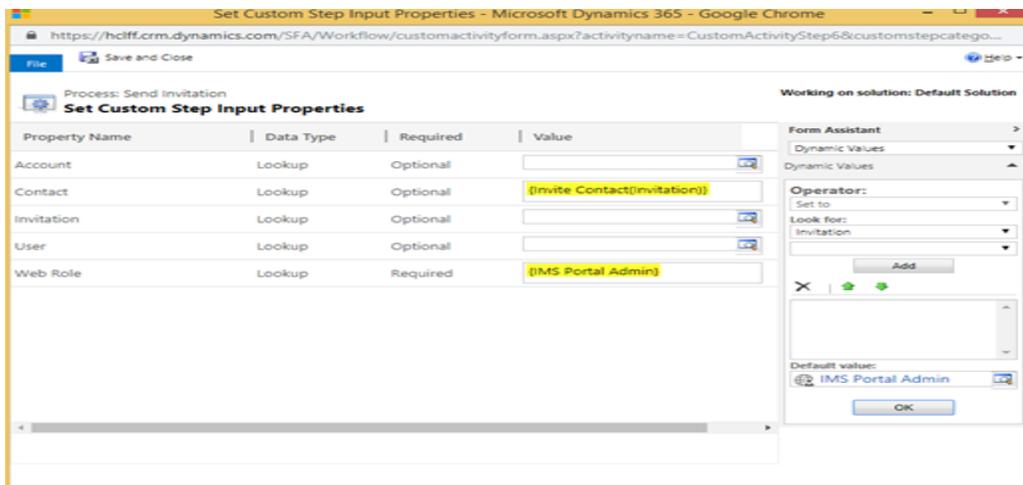
6c. Activate the workflow.
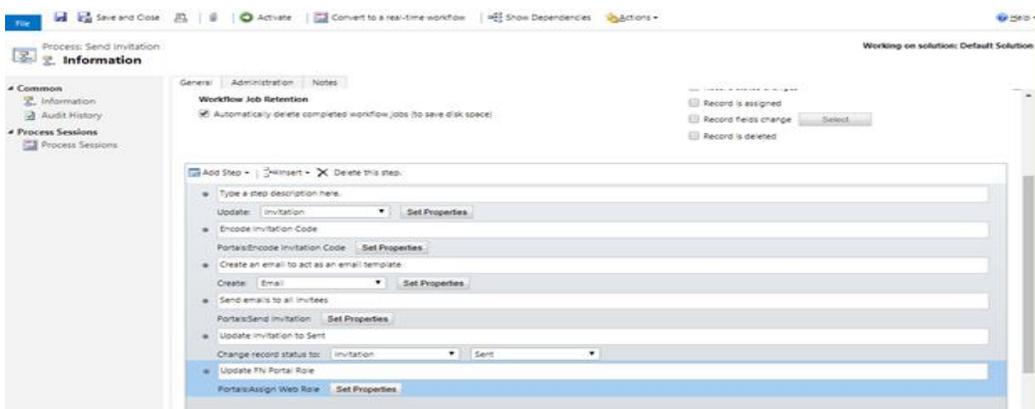
7. **SendQuestionnaireEXTsAndSendEmail**

7a. Open Set Properties of send email step.
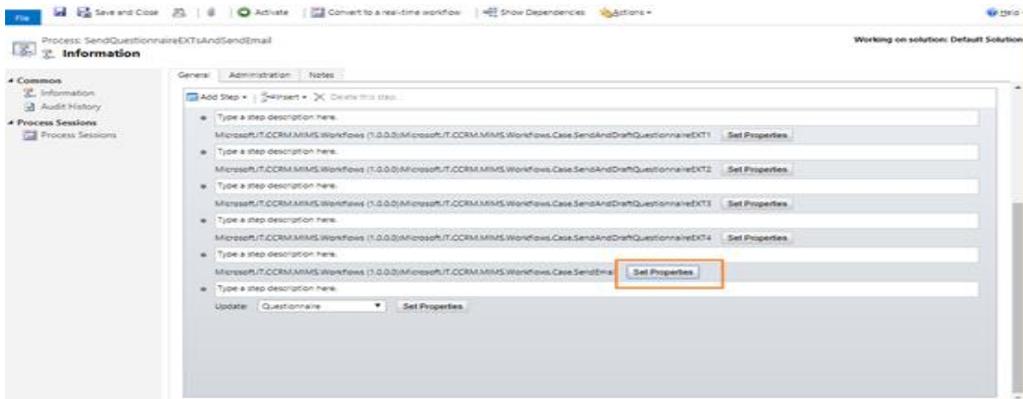
7b. Check if the From field is filled. If not, fill the field with "IMS US Immigration". Save and close the form.
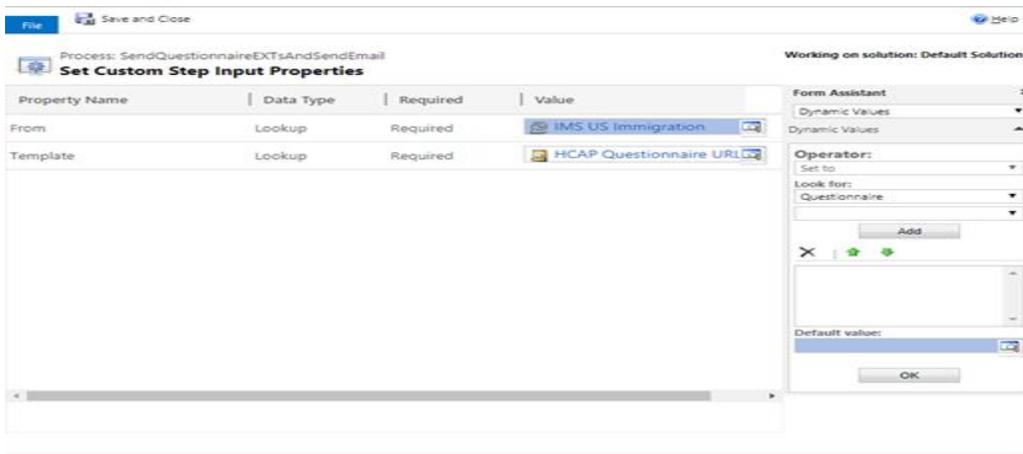
8. **Assign Owner - CanTracker Cases**

8a. Click on the lookup button as shown in the below screenshot.
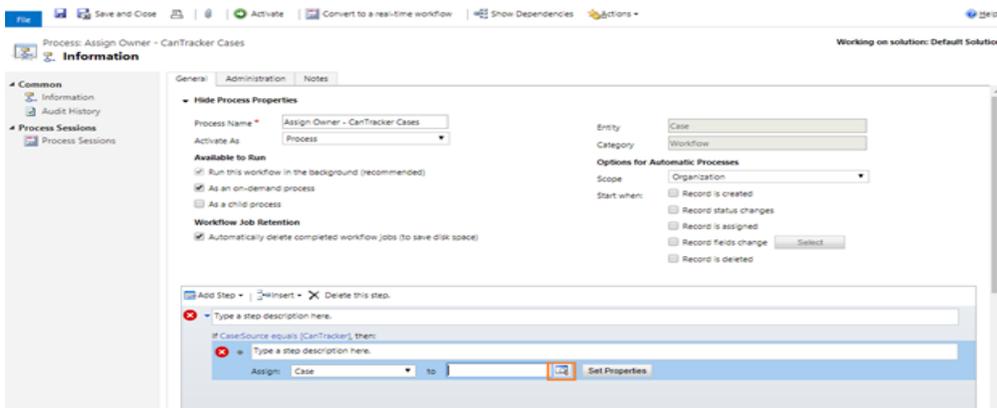
8b. Fill the field with "Process Team1".
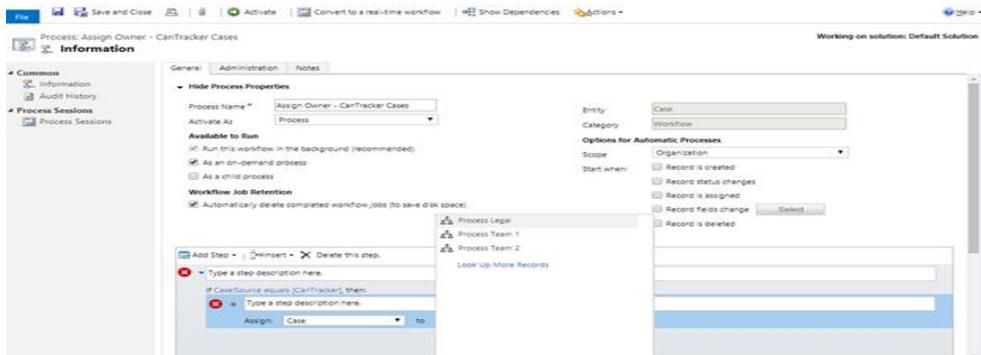
8c. Activate the workflow.
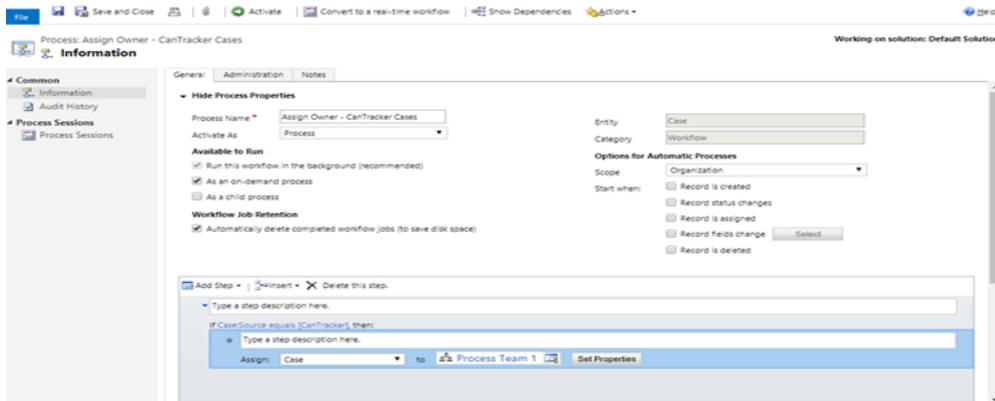
Documents Storage:

- Navigate to CRM -> Settings -> Extensions -> Integration Config
- Update the below config name values

NOTE : Azure component names appear on document are same but on azure portal component names will end with your CRM Organization Unique Name (for ex:your CRM org name:org12345678 , on the Azure portal component names end with ComponentName12345 like : IMSAppPrintAll12345)

1. **App Insights Instrumentation Key**

- Navigate to Azure
- Open the Resource "IMSAppStorageAppInsight<xxxxx>" as shown below
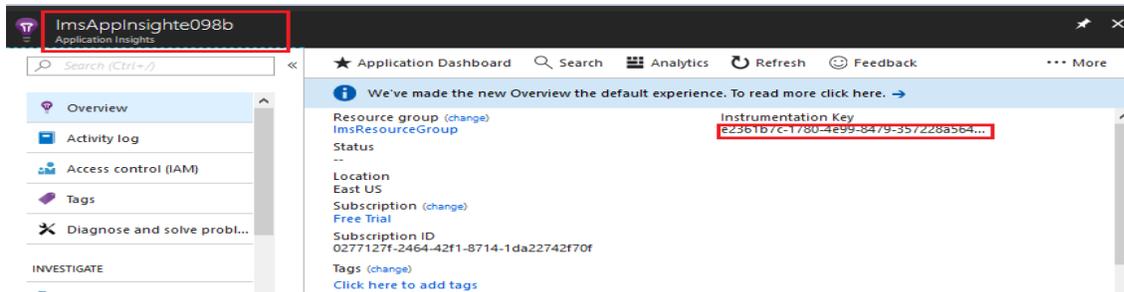
- Copy the Instrumentation Key and update the Config Value in App Insights Instrumentation Key as shown below
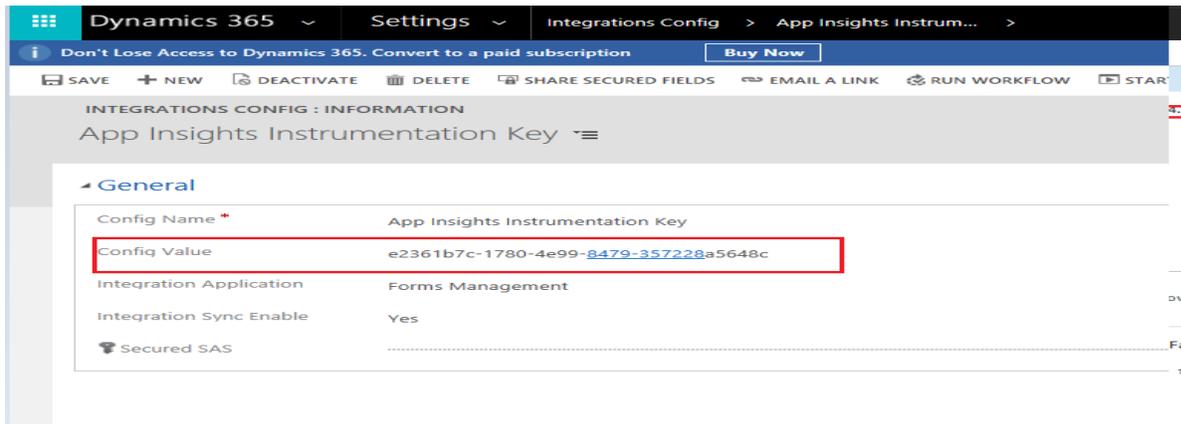
2. Azure Storage Account key

- Navigate to Azure
- Open the Resource "imsappstorageacc<xxxxx>" as shown below
- Go to Access Keys under Settings, Copy **key1 val**
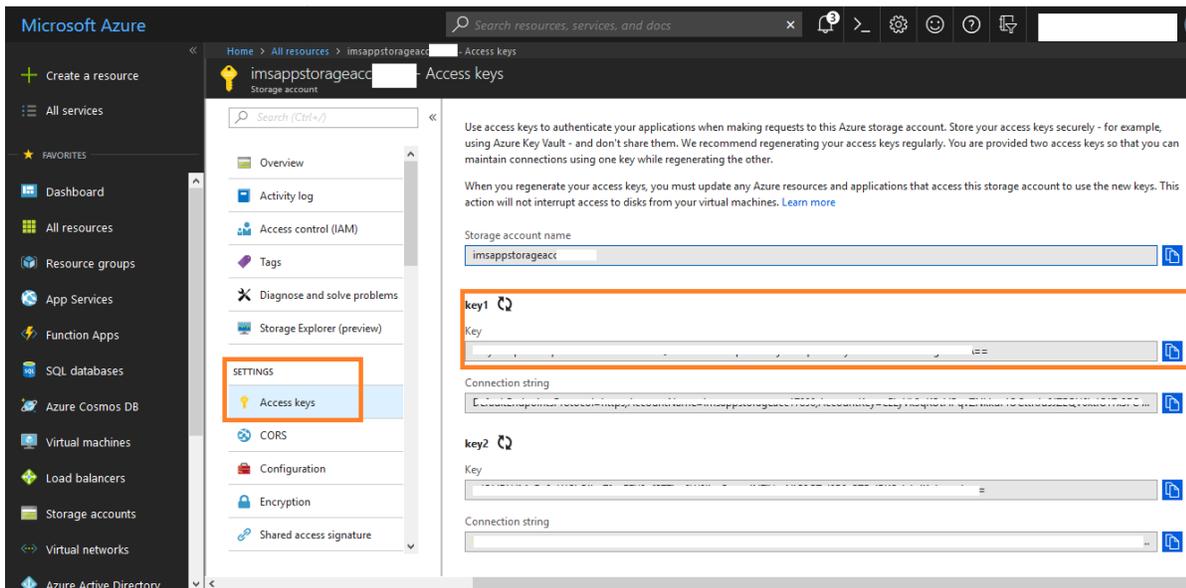
- Navigate to Settings -> Integrations Config Entity and Update the Key Value in **Azure Storage Account key** Record "**config value**" field as shown below
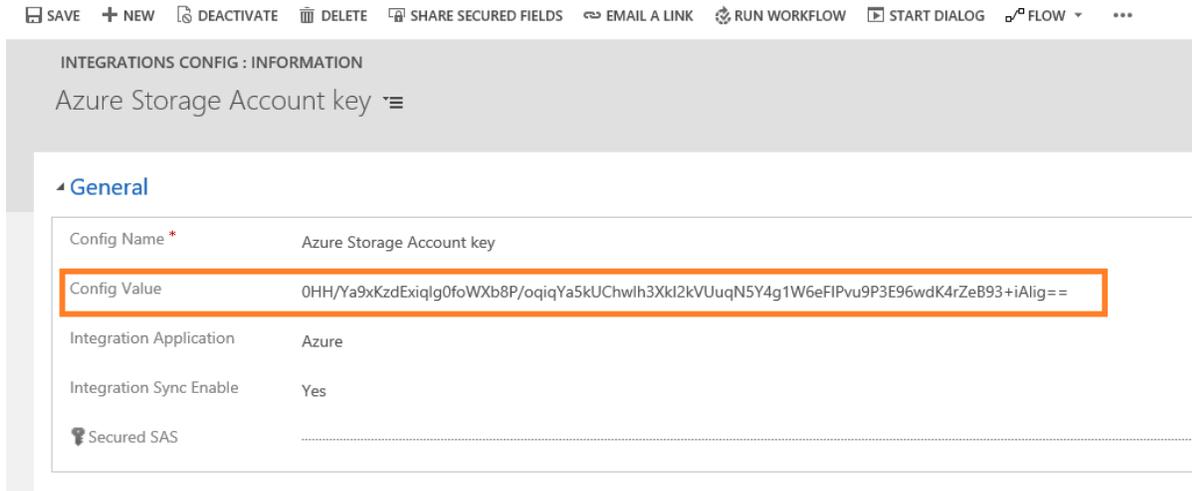
3. **Azure Storage Account Name**

- Navigate to Azure
- Open the Resource "imsappstorageacc<xxxxx>" as shown below
- Copy the storage account name as shown in below screenshot
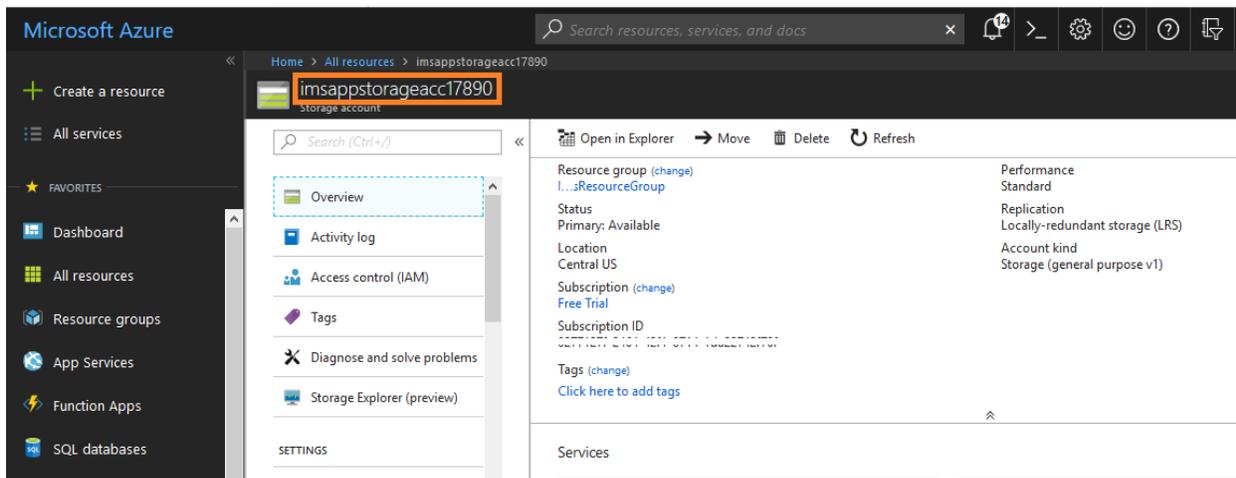
- Navigate to Settings -> Integrations Config Entity and Update the Account Name Value in Azure Storage Account Name Record "config value" field as shown below
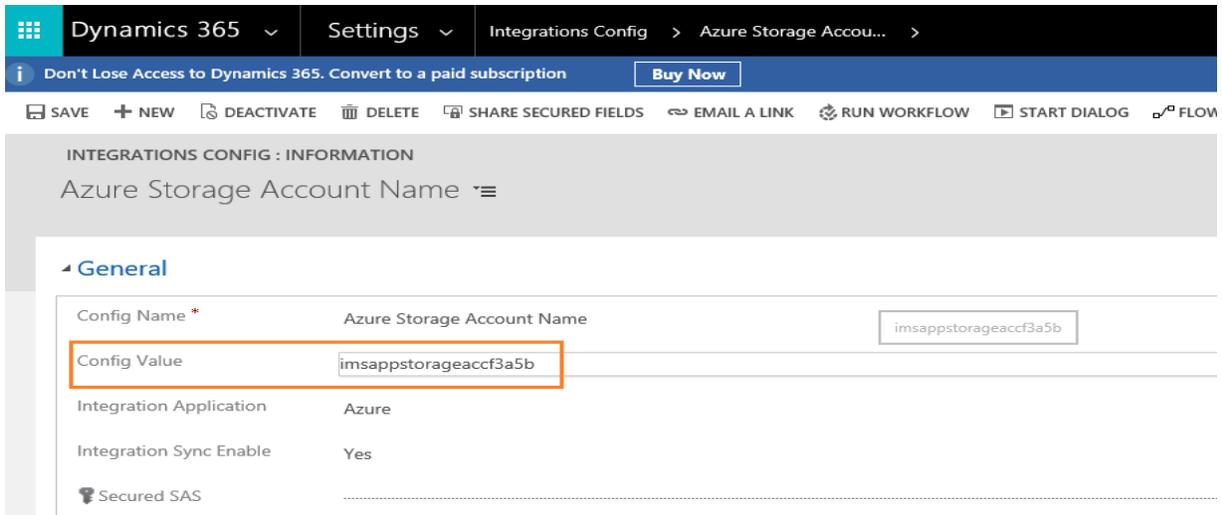
4. **Azure Storage Container**

- Navigate to Azure
- Open the Resource "imsappstorageacc<xxxxx>" as shown below
- Go To Blobs in **Blob Service** and create the container as below
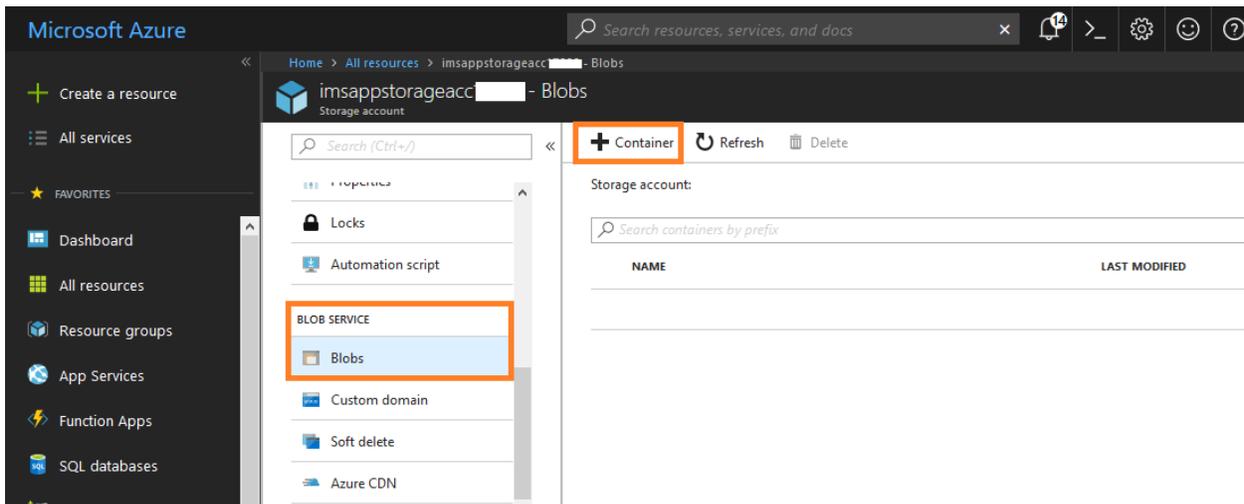
Provide name[user defined] and click on ok. name [user define] update on azure storage container "**config value**" on CRM

New container

* Name

Public access level ℹ

Private (no anonymous access) ⌄

OK   Cancel

- Copy the Container Name

- Navigate to CRM -> settings -> Integrations Entity
- Update **Azure Storage Container** Record "**config value**" field as shown below

5. **Forms Service API URL:**

- Navigate to Azure
- Open the Resource "imsappforms<xxxxx>" as shown below

- On overview select the URL as shown in below screenshot, paste it on Forms Service API URL records "**config value**" field
- After URL, add /api/v1/forms/ for Config Value

    ex: https://imsappforms82f09.azurewebsites.net/api/v1/forms/
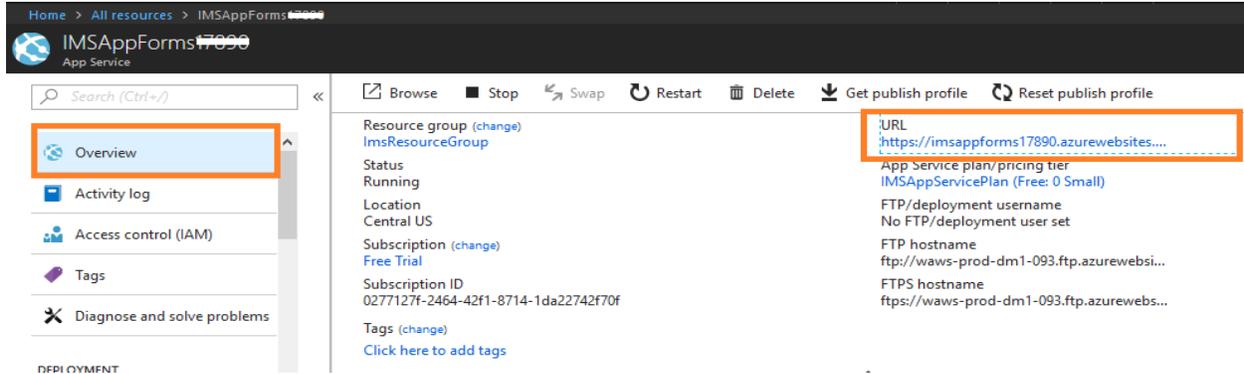
6) Secured SAS Token

Navigate to **imsappstorage<xxxxx>** resource and go to shared access signature under settings tab.

Please ensure that start date and end date fields are filled with valid dates and end date is greater than the current date.
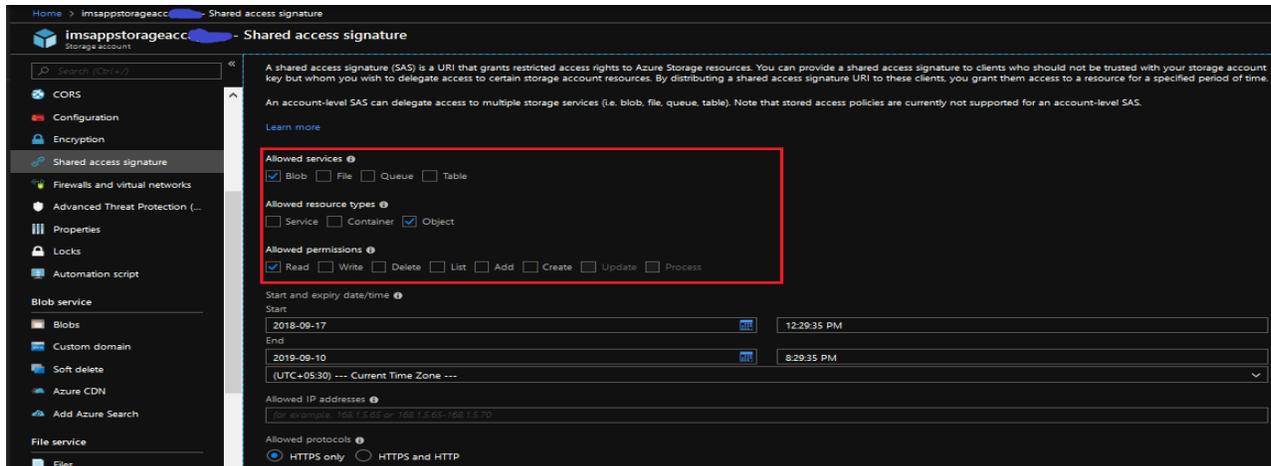
Click on Generate SAS and connection string.

Select the SAS token value as shown in below screenshots, paste it on "**Secured SAS**" field of SAS record in Integrations config in CRM.

If the SAS Key is expired , then Re Generate SAS key in azure and update the above record in crm .
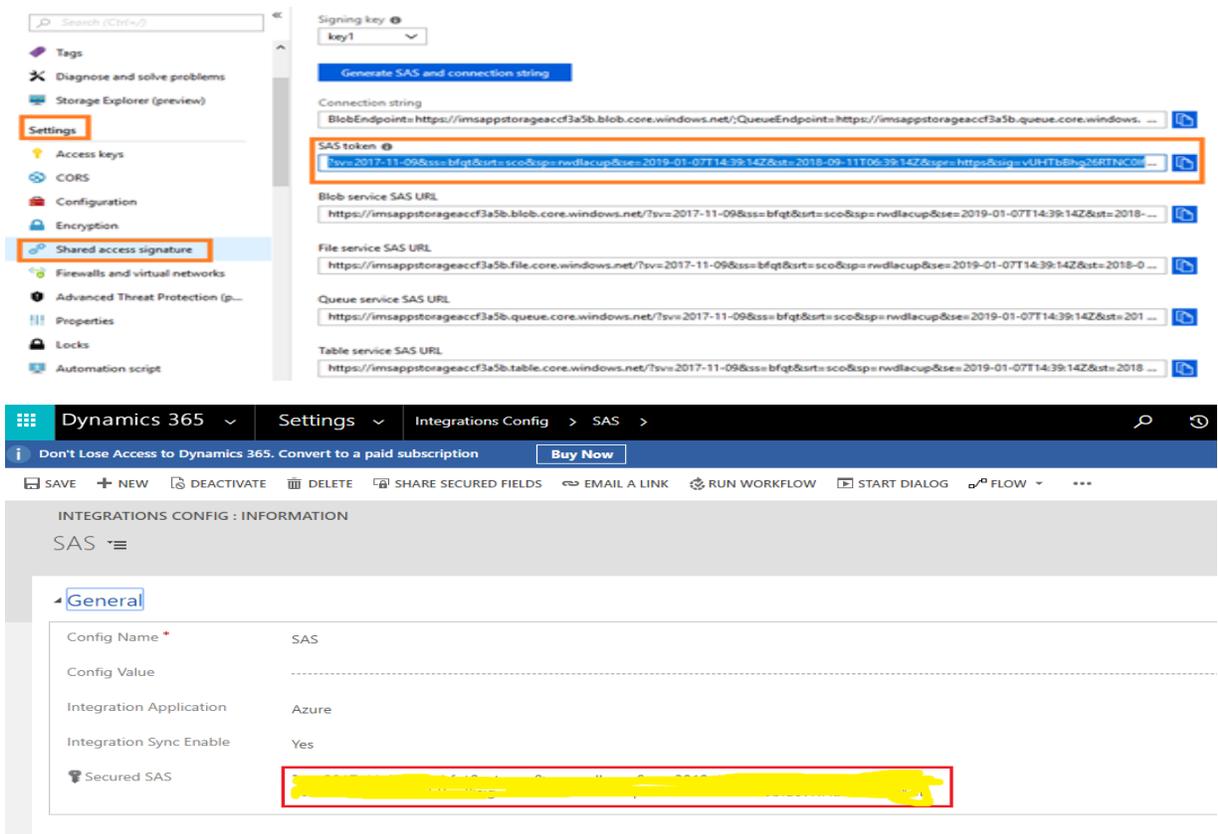
5.2 Azure Configurations

NOTE :   Azure component names appear on document are same but on azure portal component names will end with your CRM Organization Unique Name (for ex:your CRM org name:org12345678 , on the Azure portal component names end with ComponentName12345 like : IMSAppPrintAll12345)

First step on azure configuration is creating key vaults. Post deployment, on azure portal you can find components named as **ImsAppKeyVaults** following with Unique org id on given azure portal under user provided resource group.

- ▪ **ImsAppKeyVaults:**
  Open keyvault
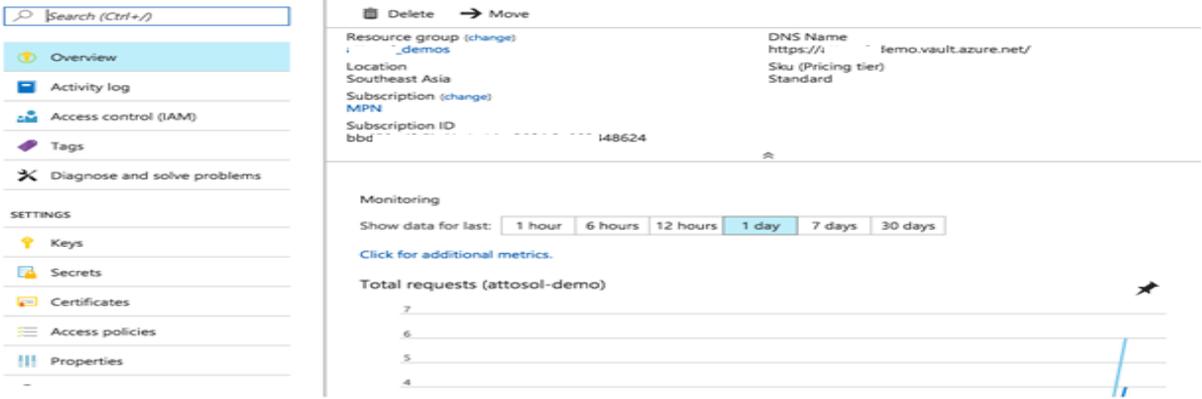
In the Azure Key Vault settings that you just created you will see a screen similar to the following. Click Secrets in the blade, followed by Add button on the top right.

Type in your secret details:

Secret details name should be as follows(yellow highlighted)

1. Name : BinderAdminUser Value :[provide binder application **Run as** username] ex:abc@ee.com
2. Name : BinderPassword Value :[provide binder application password]
3. Name : MIMSCRMOrgUrl Value :[Target CRM instance organization url]
   On CRM : Settings → Customization → Developer Resource →
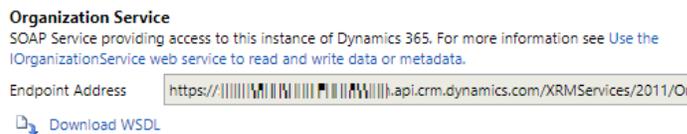
4. Name : PrintAllAdminUser Value :[provide printall application **Run as** username] ex:abc@ee.com
5. Name : PrintAllPassword Value :[provide printall application password]

6. Name : <mark>MIMSAppSourceAdmin</mark> Value :[provide web job applications **Run as** username]
7. Name : <mark>MIMSAppSourceCRMPwd</mark> Value :[provide web job applications password]

On part on Azure Configuration now we are going to configure for **IMSAppPrintAll** following with Unique org id **(**web app**)** and **IMSAppBinder** following with Unique org id **(**web app**) .** Below steps to create/modify.

- ▪ **Managed Service Identity**
  Goto Settings and select **Managed Service Identity.**

  If is **ON** , don't change anything. If it is **Off**, change it to **On** and save. (After clicking on save it will take some time, wait till it save.)
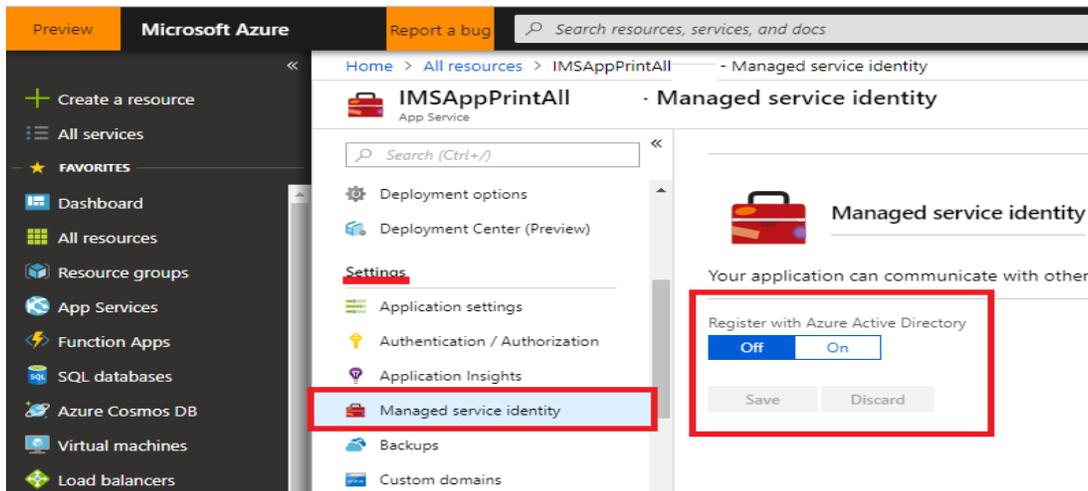
Application Settings

For application settings we need to create below parameters:

1) KeyVaultAppClientId :
2) keyvaultclientId
3) keyvaultclientsecretId

Azure Portal > Azure Active Directory > App Registrations > New Application Registration

Note down your details. Remember, your client id is same as Application ID.
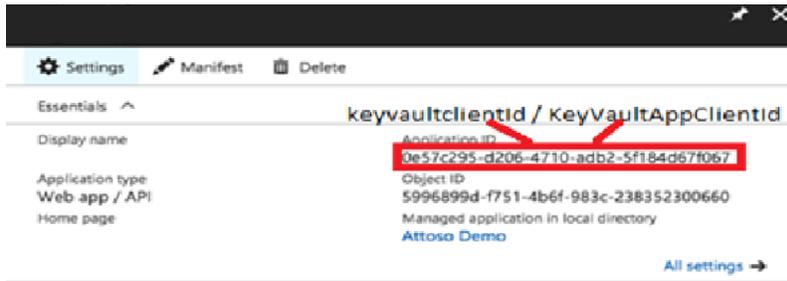
Click on Settings in the above image and navigate to keys section as shown below

While Generating the key for any app registration Provide some user defined name in the description and select "**Never** expires" as the duration and save the record. A key will be generated. Take this key as the keyvaultclientsecretId.
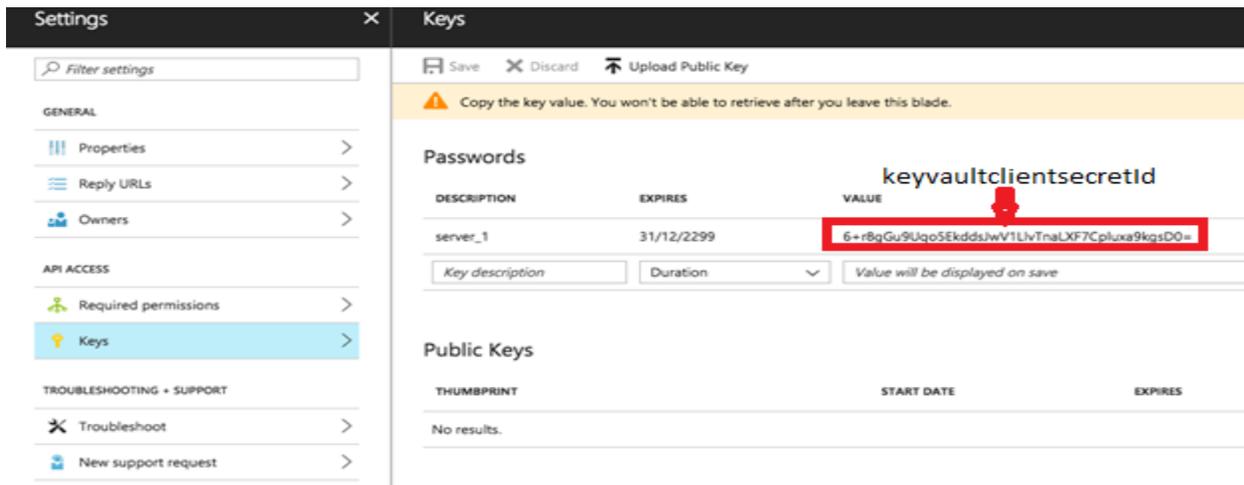
4) keyvaulturl

Azure portal > ImsAppKeyVaults following with Unique org id > Overview > Take DNS Name

DNS Name
https://imsappkeyvaultsf7   ′.vault.azure.net/

5) SecretUrlUserId

Azure portal > ImsAppKeyVaults following with Unique org id > Overview > Take DNS Name
Remove last charecter (/) from url

The above setting configurations are as shown below , after enter the required application settings and save it.
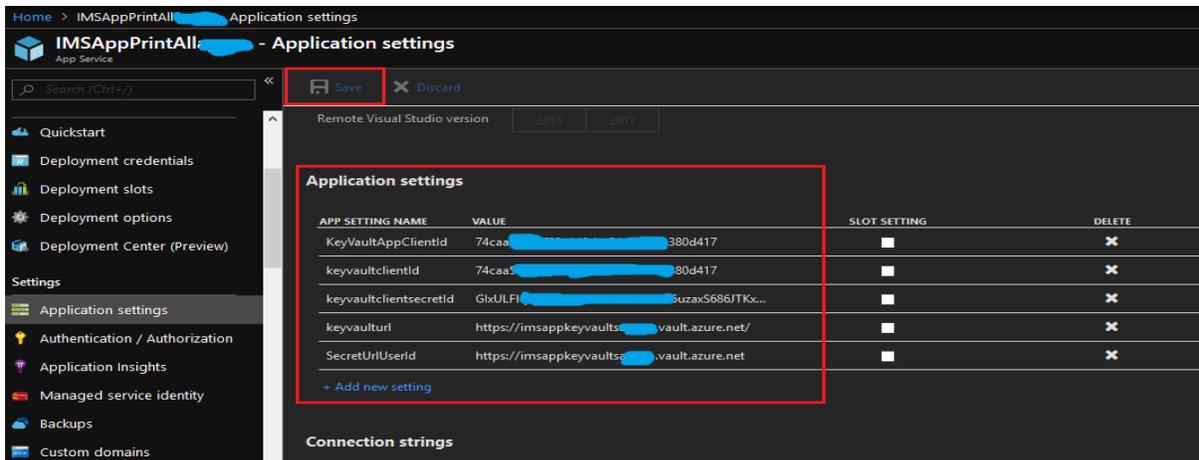
Now Go to Keyvault [**ImsAppKeyVaults<xxxxx>]**--> access policies --> click on add access policy and provide the application on select principal field

Select the application and provide the permissions except purge and click on ok.
Now save the access policies
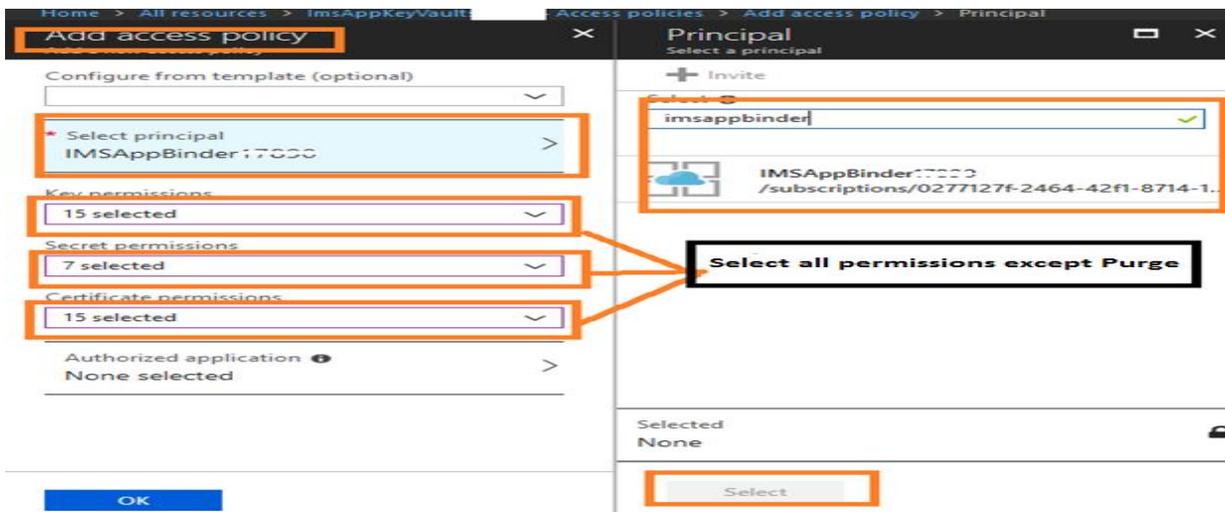
Finally, you will see the access policy like below

For Binder and Web Job App Services also we need to follow the same procedure

1) On and save managed service Identity

2) Azure active directory application registration binder/webjob

3) application settings – adding keyvalut url, application and secret ids.

3) Adding application to access policy of keyvault..

CRM Configuration for Printall :

Navigate to Settings → integration Configuration → search for "PrintAllApplicationURL"

For Config Value : Azure portal > IMSAppPrintAll following with Unique org id > Overview > URL

CRM Configuration for Binder :

Settings → integration Configuration → search for "PrintBinderURL"

For Config Value : Azure portal > IMSAppBinder following with Unique org id > Overview > URL + /CreateBinderPrint.aspx?ID=

Ex: https://imsappbinder820f9.azurewebsites.net/CreateBinderPrint.aspx?ID=

Form Configurations:

1) For Forms App (**IMSAppForms**) service need to add below items on app settings:

AIKey : (navigation : IMSAppStorageAppInsight<xxxxx>-- overview – Instrumentation key)
  a. CloudStorageConnectionString: (navigation : imsappformstrge<xxxxx> – Access keys – Connectionstring)
  b. Save the Settings.

Note: Remove text "**;EndpointSuffix=core.windows.net**" form the CloudStorageConnectionString
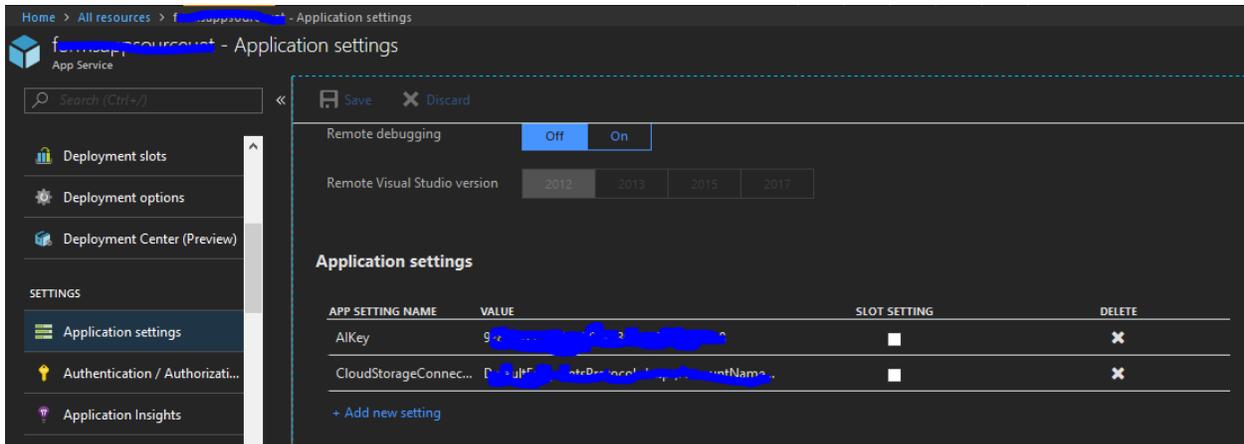
Adding Application Settings on App service.

IMP Note: Target CRM instance URL must declare under Forms App (**IMSAppForms**) →ss CORS
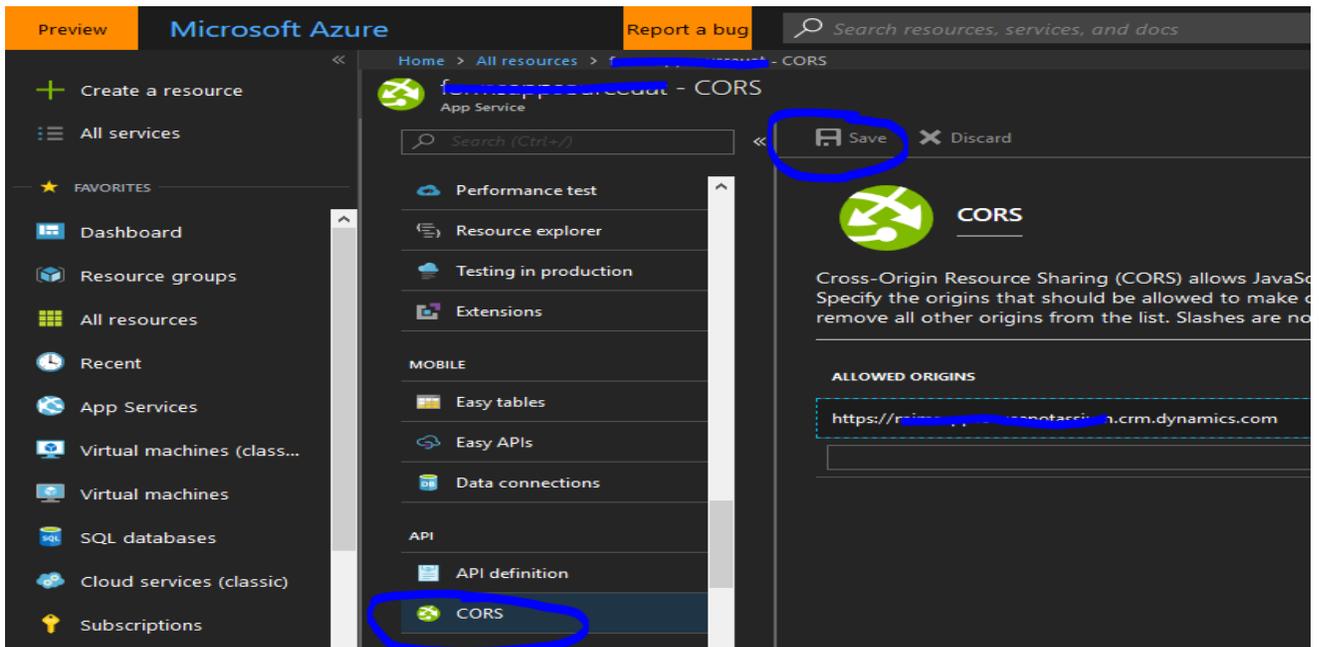
CRM side Form Management related configuration :

Settings → integration Configuration → search for "App Insights Instrumentation Key "

For the "App Insights Instrumentation Key" record we should provide "Config Value"

For Config Value :

Azure portal > IMSAppStorageAppInsight following with Unique org id > Overview > Instrumentation Key

Settings → integration Configuration → search for "Forms Service API URL"

For the "Forms Service API URL" record we should provide "Config Value"

For Config Value :

Azure portal > IMSAppForms following with Unique org id > overview > URL

After url add /api/v1/forms/ for Confiig Value

ex: https://imsappforms82f09.azurewebsites.net/api/v1/forms/

Update Master Forms Records :

Get all the Master Forms with "FormType" value Equals to "MasterForm" as shown below
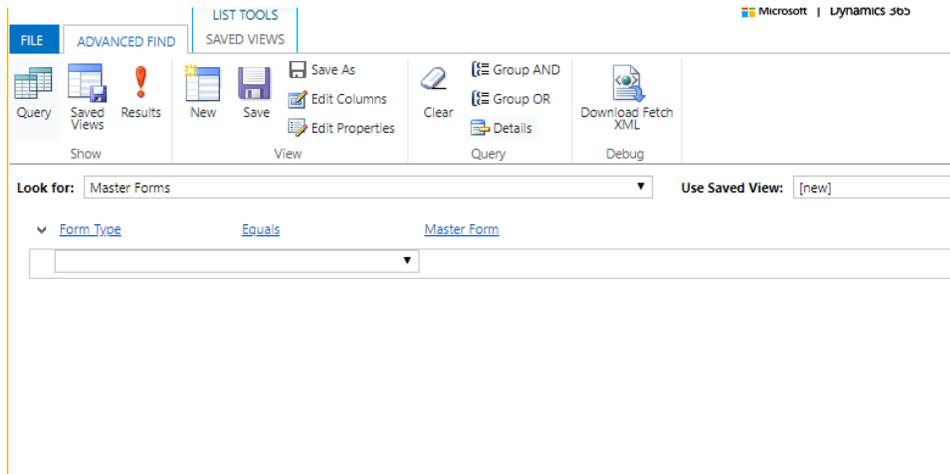
To change the URL, follow below steps

1) Take new Master Form and fill all the fields as it is except URL field

2) Save the form (Do Not Click "Save and Close" Button)

Follow the step 1 and 2 for all the Master Forms

Now able to see the URL with forms azure application name as below

Example : "G-28" Master Form

6.TroubleShooting Details

Follow below steps if any of the required components were not installed appropriately during deployment. Failures may occur if any of the pre-requisites not provided, network disconnections, Azure components take more time than anticipated to deploy on cloud or any other unexpected failures. Follow the below steps to resolve them manually if not completed automatically by Dynamics CRM OOB tool Package Deployer.

6.2 Azure Applications

6.2.1 Web Service Plan

If IMSAppServicePlan application is not created in azure as shown below

Create the AppService Plan with name of 'IMSAppServicePlan' as shown below

6.2.2 Web Jobs

If IMSAppWebJobs followed by CRM organization unique name application is not created in azure as shown below

Create new webapp as shown below

- Go To -> All Resources -> Web -> Web App
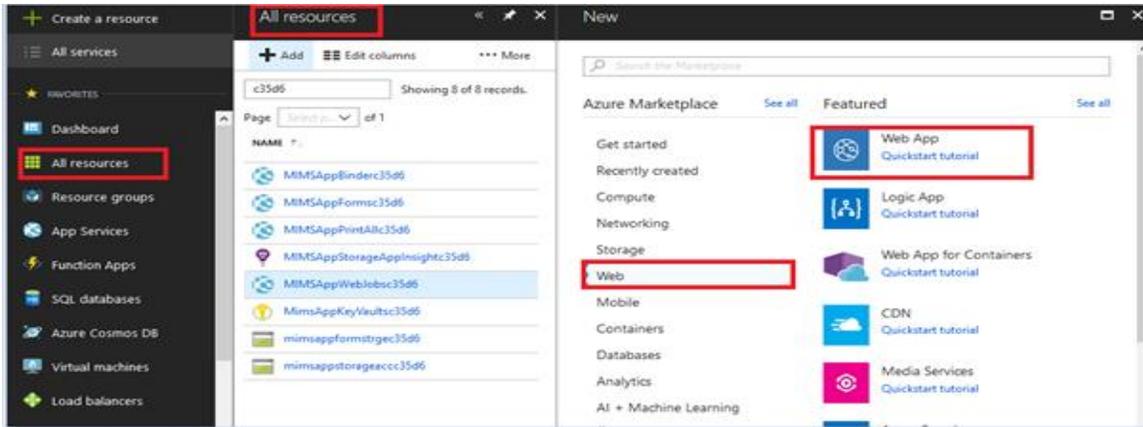
Create new application with name as below

IMSAppWebJobs followed by five characters of an organisation unique name as shown below

Example: Organisation unique name is "orgdc536fg", and then the application name is like

 "IMSAppWebJobsdc536" as shown below
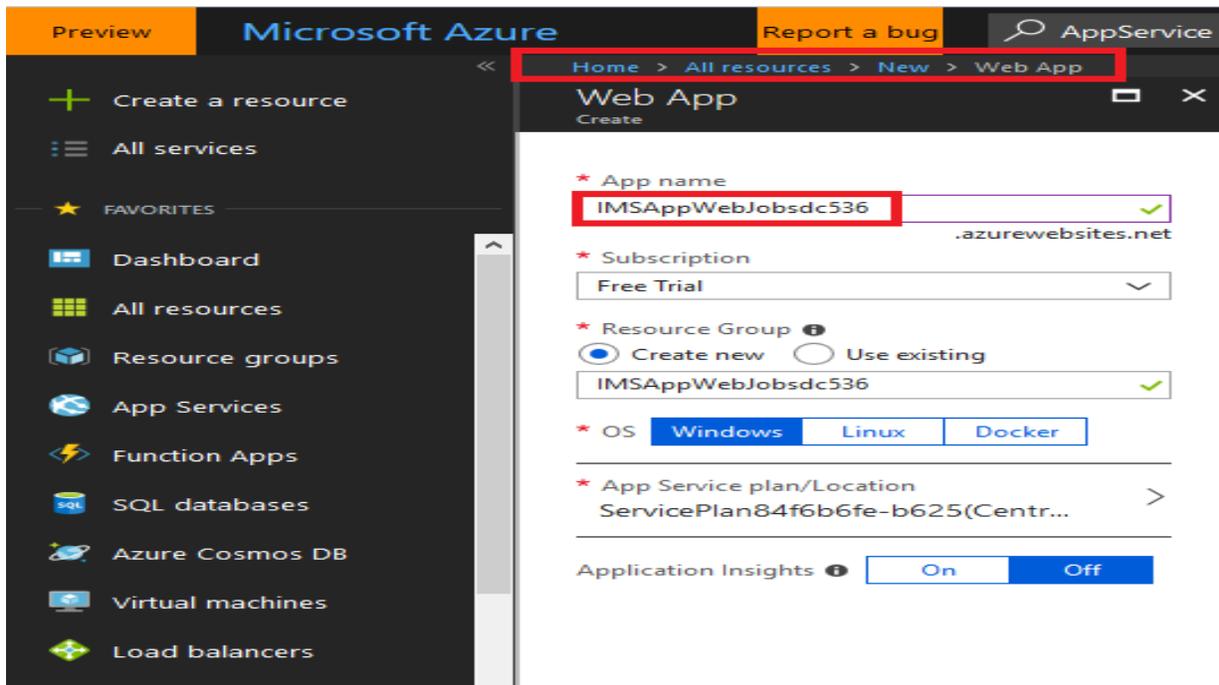
Navigate to "IMSAppWebJobs<xxxxx>" -> Webjobs as shown below
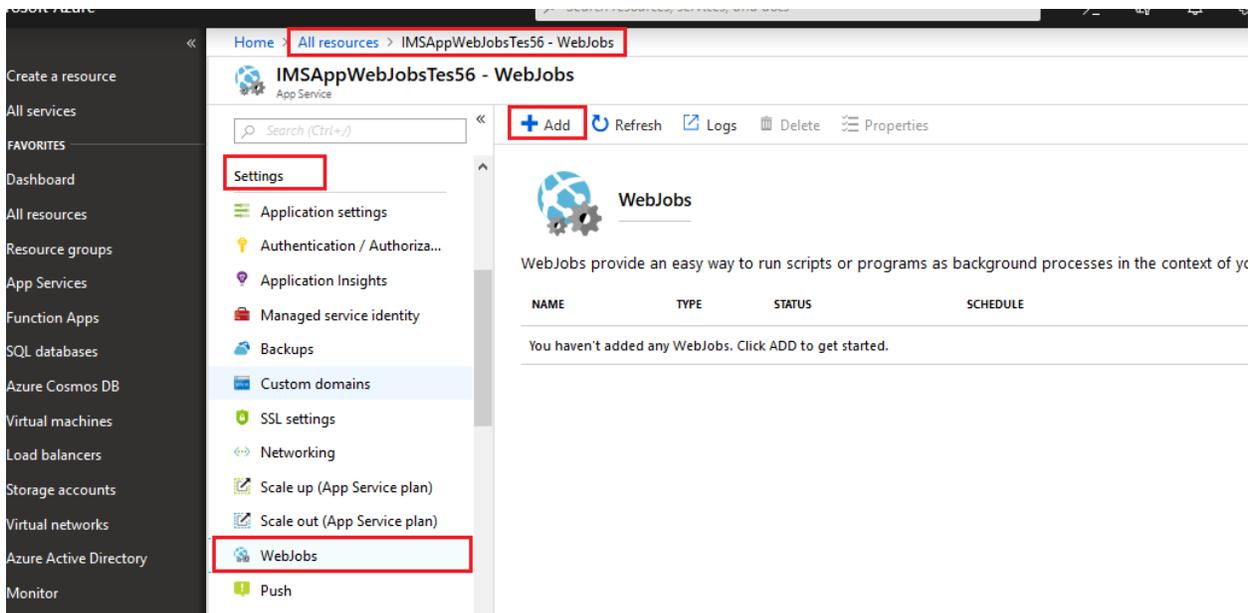
- Create the below web jobs and upload the folders as shown below.
- All the web jobs exist in "WebJobs" Folder from GitHub (https://github.com/microsoftappsource/IMS/tree/master/WebJobs). They need to be uploaded while creating web jobs.

1. CreateTaskOnDepenedentAgeChang
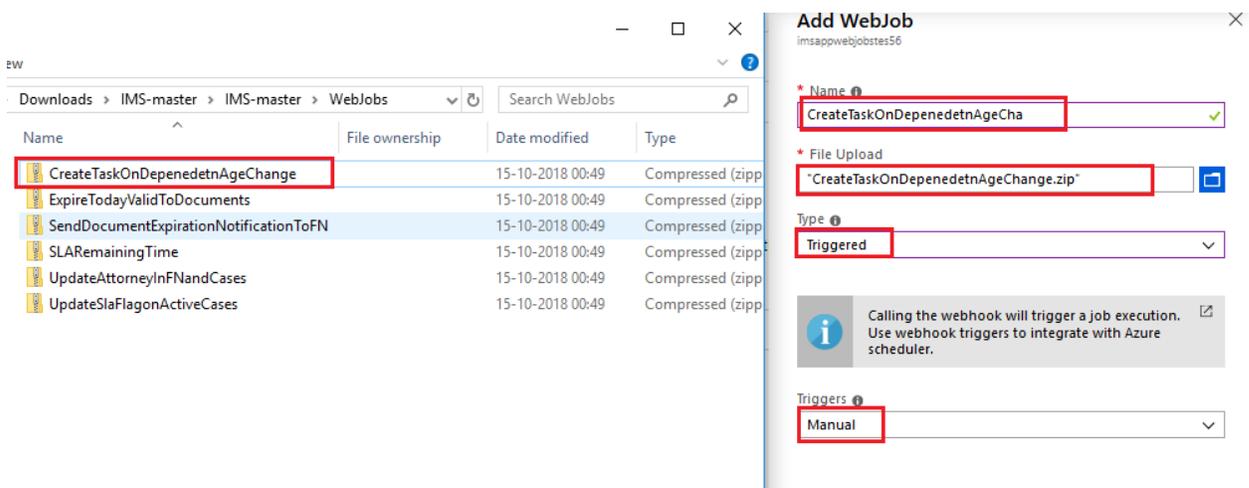
- ON File Upload -> upload the webjob file..
- Created the webjob as shown below.

- Select the WebJob and Click on Run Button to execute the WebJob.

Repeat the steps for all the below webjobs in the "WebJobs" Folder

2. ExpireTodayValidToDocuments
3. SendDocExpirationNotification
4. SLARemainingTime
5. UpdateAttorneyInFNandCases
6. UpdateSlaFlagonActiveCases

6.2.3 Web Applications

IMSAppPrintAll Application

- If IMSAppPrintAll followed by organization unique name application is not created in azure
- Create Webapp in azure as shown below
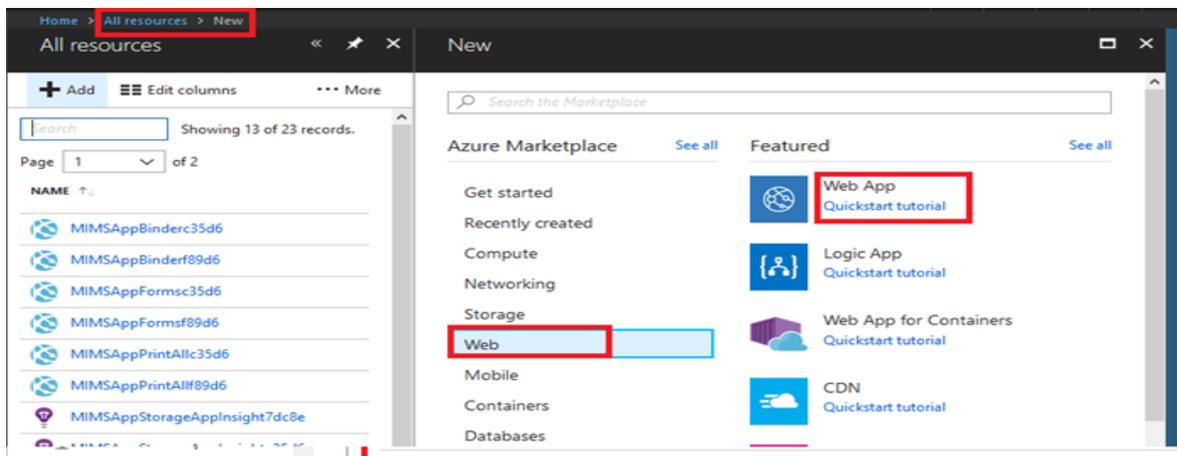
- Create "IMSAppPrintAll" followed by five characters of an organization unique name as shown below

Example: "IMSAppPrintAlldc536"
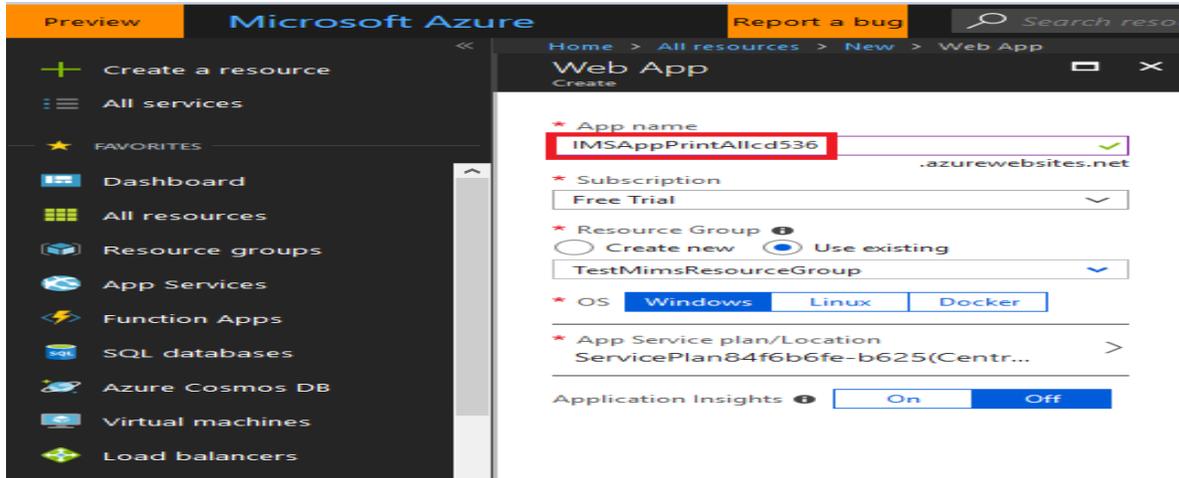
- Run the below PowerShell command as shown below

$subscriptionId = ''   #Azure Subscription ID

$resourceGroupName = '' #Azure Resource Group Name

$IMSAppSourcePrintAll_Path = '' # Print All Application Path from WebApplications folder downloaded from the GitHub (https://github.com/microsoftappsource/IMS) as shown below image

$IMSAppPrintAll ='''   # Print All Application name, Example: 'IMSAppPrintAlldc536'

Add-AzureAccount

Select-AzureSubscription -SubscriptionId $subscriptionId

Publish-AzureWebsiteProject -name $IMSAppPrintAll –package $IMSAppSourcePrintAll_Path

- Script has to be executed without getting error in PowerShell

IMSAppBinder Application

- If IMSAppBinder followed by organization unique name application is not created in azure
- Create Webapp in azure as shown below
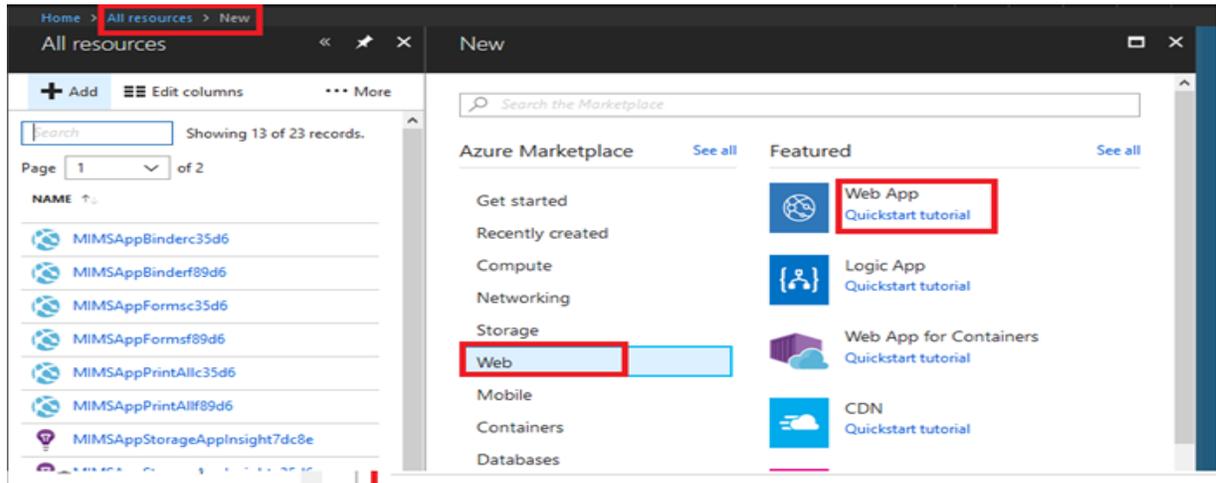
- Create "IMSAppBinder" followed by five characters of an organization unique name as shown below

Example: "IMSAppBinderdc536"
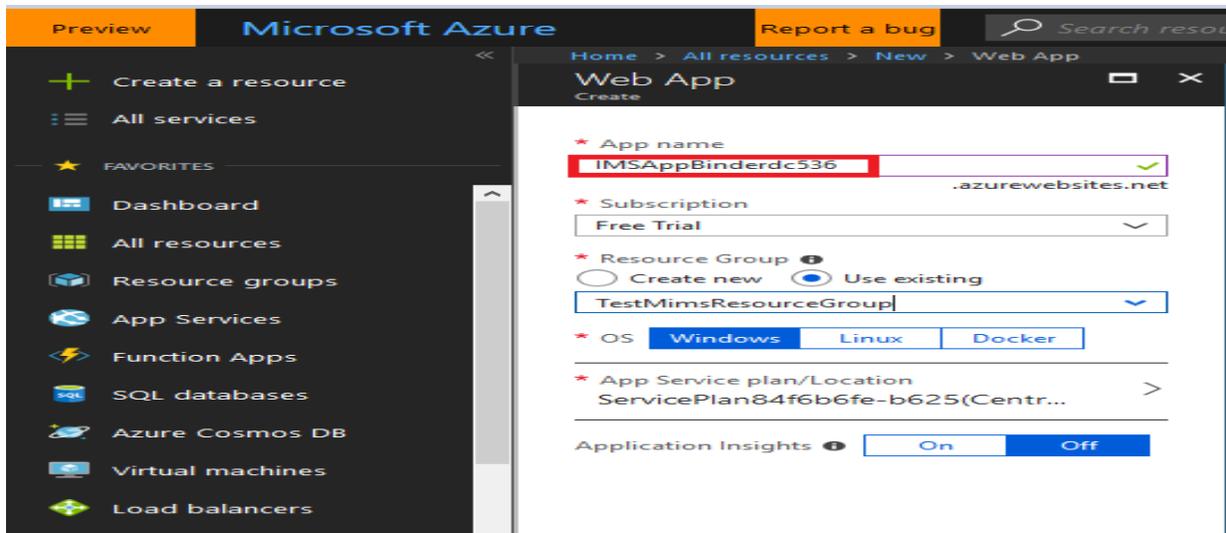
Run the below PowerShell command as shown below

$subscriptionId = ''   #Azure Subscription ID

$resourceGroupName = '' #Azure Resource Group Name

$IMSAppSourceBinder_Path = '' # Binder Application Path from WebApplications folder downloaded from the GitHub (https://github.com/microsoftappsource/IMS) as shown below imag

$IMSAppBinder ='' # Binder Application name, Example: 'IMSAppBinderdc536'

Add-AzureAccount

Select-AzureSubscription -SubscriptionId $subscriptionId

Publish-AzureWebsiteProject -name $IMSAppBinder –package $IMSAppSourceBinder_Path

- Script has to be executed without getting error in PowerShell

IMSAppForms Application

- If IMSAppForms followed by organization unique name application is not created in azure
- Create Webapp in azure as shown below
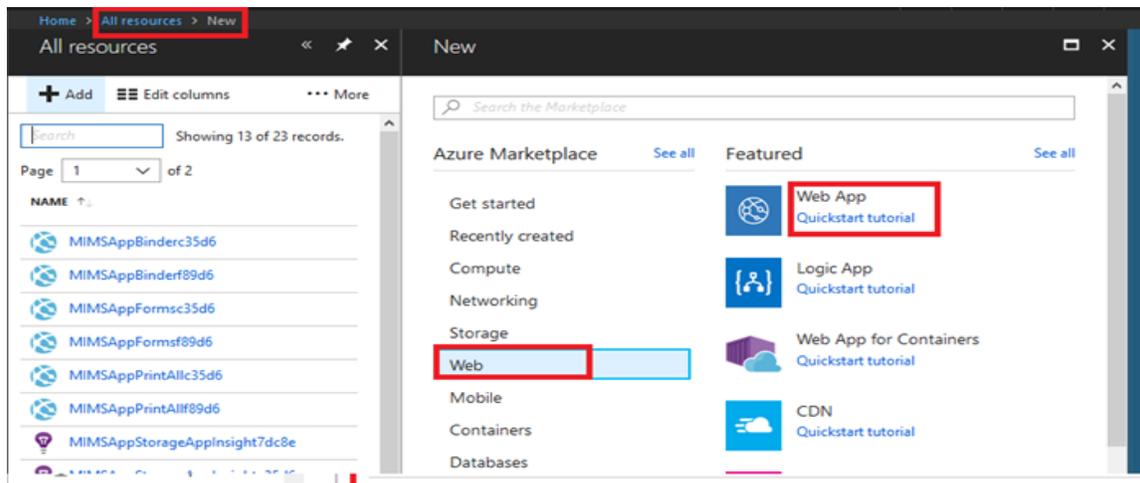
- Create "IMSAppForms" followed by five characters of an organization unique name as shown below

Example: "IMSAppFormsdc536"
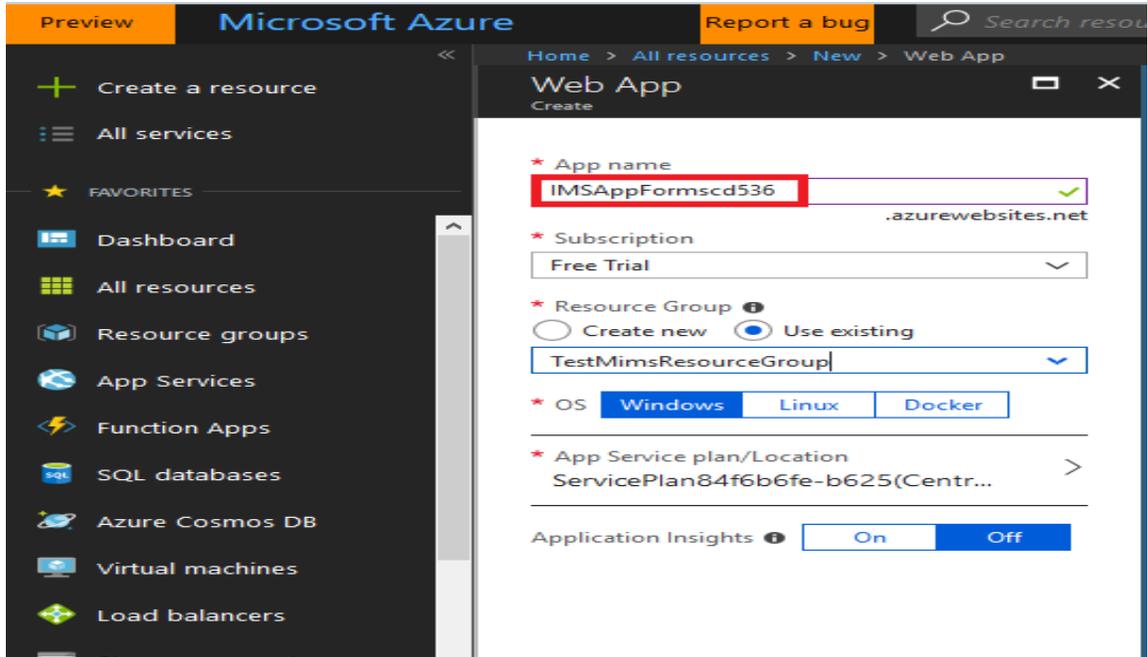
Run the below PowerShell command as shown below

$subscriptionId = ''   #Azure Subscription ID

$resourceGroupName = '' #Azure Resource Group Name

$IMSAppSourceForms_Path = '' #Forms Application Path from WebApplications folder downloaded from the GitHub (https://github.com/microsoftappsource/IMS) as shown below image

$IMSAppForms =''   #Forms Application name, Example: 'IMSAppFormsdc536'

Add-AzureAccount

Select-AzureSubscription -SubscriptionId $subscriptionId

Publish-AzureWebsiteProject -name $IMSAppForms –package $IMSAppSourceForms_Path

6.3 FN Portal

1. Not able to see the Foreign National Cases as shown below

Resolution:

- Navigate to CRM -> Portals -> Web Roles -> Administrators -> Foreign Nationals
- Add the Foreign National to the administrator role
- Navigate to CRM -> Portals -> Web Roles -> Administrators -> Entity Permissions
- Add the "FN - Cases" Entity Permission to the administrator role
- Repeat all the above steps for the Documents, FAQ, Family and Tasks when you are not able to see the related entity records

6.4 Questionnaire Portal

1. Not able to create record through portal and getting the permissions issues as shown below

HCap Questionnaire

15%

Passport Information

If you are a citizen of more than one country, please add passport information for all countries of citizenship.

Do you hold a valid passport? *

Yes ▾

Please enter details of all current, unexpired valid passport(s).

Have you been issued passports from more than one country?

▾

Passport Number ↑	Date Passport Issued	Date Passport Expires	Issue Country/State/City

You don't have permissions to view these records.

PREVIOUS   NEXT

Resolution:

- Navigate to CRM -> Portals -> Entity Permissions
- Open "Birth & Passport Information" Entity Permission record
- Add the Administrator Web Role to the "Birth & Passport Information" Entity Permission record

7.Uninstalling Immigration AppSource System

- Navigate to CRM -> Settings -> Solutions
- Select the "IMSAppSource" solution and delete the solution

The Solution related entities data will be deleted by the solution.

Note: Portal related records should delete by the user manually.

8. Aspose License SetUp

- Aspose license adding to application process:
- Once license purchased we need to add "Aspose.Total.lic" file to the "IMSAppPrintAll" & "IMSAppBinder" application Publish the application.

To download the file:

1) Go to My Orders and Quotes.

 This page lists your order history with Aspose. In the end of column of the grid next to each order is a Review link.

2) Click Review for the order you want to download a license for.

 The details for that order are displayed.

3) At the bottom of the page will be a link titled Download License.

4) Click Download License at the bottom of the page.

 A dialogue appears to allow you to select where to save the license.

https://purchase.aspose.com/policies/download-license

Once file downloaded unzip "IMSAppPrintAll" & "IMSAppBinder" applications and place the file as shown in below path location.

Name	File ownership	Date modified	Type	Size
bin		9/18/2018 7:24 PM	File folder	
ApplicationInsights		11/25/2017 6:02 PM	XML Configuratio...	6 KB
Aspose.Total.lic		9/18/2018 7:24 PM	VisualStudio.lic.d3...	1 KB
███████████age		9/9/2017 3:16 PM	ASP.NET Server Pa...	1 KB
packages		4/17/2018 1:22 PM	XML Configuratio...	3 KB
PrecompiledApp		9/18/2018 3:30 PM	XML Configuratio...	1 KB
Web		9/18/2018 3:30 PM	XML Configuratio...	2 KB

Product: Aspose. Total for .NET

License file name : Aspose.Total.lic

End of Document